

UNITED STATES COAST GUARD OCEANOGRAPHIC REPORT No. 30

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OCEANOGRAPHY OF THE WEDDELL SEA

January-March 1968

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UNITED STATES COAST GUARD
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UNITED STATES COAST GUARD OCEANOGRAPHIC UNIT

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OCEANOGRAPHY OF THE WEDDELL SEA

January-March 1968

Robert B. Elder

James M. Seabrooke

WASHINGTON, D.C.



April 1970

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USCGC GLACIER (WAGB-4)

Abstract

During January–March 1968, the USCGC GLACIER (WAGB 4) penetrated the pack ice of the Weddell Sea to over 75° S. latitude in support of the first phase of the International Weddell Sea Oceanographic Expedition (IWSOE). Fifty-eight oceanographic stations were occupied in the southwestern and western Weddell Sea, most of which were in areas never before surveyed. The U.S. Coast Guard Oceanographic Unit performed analyses of temperature, salinity, oxygen and dissolved nutrients. These data are presented, accompanied by a preliminary interpretation of the oceanography of the Weddell Sea. The water masses and processes involved in the formation of Antarctic Bottom Water are discussed.

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OCEANOGRAPHY OF THE WEDDELL SEA

January - March 1968

Introduction

The importance of the oceanographic processes of the Weddell Sea and the need for their study has long been recognized. This area is generally believed to be the source of most of the Antarctic Bottom Water that flows northward into the ocean basins. There are varying opinions on the northward extent of Antarctic Bottom Water. Defant (1961) indicated that it can be traced to 25°N. in the Pacific and 8° N. in the Atlantic while Dietrich (1965) traced it to as far north as 50° N. latitude in the Pacific and 45° N. latitude in the Atlantic.

Just as the importance of the oceanographic processes of the Weddell Sea has long been recognized, the difficulty of such a study has also been apparent. Prior to the International Geophysical Year (IGY) the Weddell Sea was only crossed five times; by James Weddell in 1823, by Sir James Clark Ross in 1843, by W. S. Bruce in 1904, by Wilhelm Filchner in 1911, and by Ernest Shackleton in 1915. (Klepikov 1963). The latter two accounts especially indicate the treachery of the Weddell Sea since both ships became ice-bound for prolonged periods of time and, in the case of Shackleton's voyage, resulted in the complete destruction of *ENDURANCE*. The sheer heroism of the account of the survival of Shackleton and his crew is unequalled outside of fiction.

Even with modern icebreakers, an extensive area in the Western Weddell Sea remained unstudied. In the early 1960's several methods of observation were considered. One idea was to initiate a program similar to the Arctic's Operation Ski Jump. Upon further investigation, this proved to be impractical owing to the remote location of the Weddell Sea. The flight time from an existing air support site or the practical problems in setting up a temporary site were formidable. More important, ice conditions in the Weddell Sea are not suit-

able for even the most daring aviator to attempt landing; hence plans for an aircraft supported oceanographic program were abandoned.

Despite obvious difficulties, the National Science Foundation included the study of the oceanography of the Weddell Sea in its long range plans. The need for such a program was also evident to the U.S. Coast Guard and fit into its expanded oceanographic mission. Consequently, owing to the combined needs of the National Science Foundation and the U.S. Coast Guard, it was decided to modify USCGC *GLACIER* (WAGB 4), the largest of the nation's icebreakers, to make it capable of carrying out an extensive oceanographic program. Modifications made prior to IWSOE '68 for Antarctic oceanographic operations included addition of five oceanographic laboratories, two oceanographic winches, a level luffing crane for over-the-side work, a salinity-temperature-depth recording system, an 8K memory computer, and standard oceanographic laboratory equipment. Prior to IWSOE '69 an additional winch and luffing crane were installed to give USCGC *GLACIER* piston coring and heavier dredging capacity. These modifications made meaningful, well-rounded oceanographic programs possible. Figure 1 shows the alterations accomplished on USCGC *GLACIER*.

Two items which contributed greatly to the success of IWSOE '68 were satellite photo information and satellite navigational equipment. Navigation in the Weddell Sea is extremely difficult and inaccurate. No navigational aids are available and celestial navigation is hampered by skies that are generally overcast, coupled with an indistinct horizon due to the presence of ice. These conditions make the calculations of even the best of navigators subject to considerable uncertainty.

The accuracy of satellite navigation was not affected by either clouds or indistinct horizon, hence, the quality of the navigation during the expedition was quite high. Use of satellite photos to determine areas of light ice and to

aid in prediction of ice conditions in particular areas also contributed towards more effective operation and lessened the chance of unintentionally wintering over.

IWSOE '68 Programs

A number of institutions took part in the expedition. A brief description of each of their programs is given below.

University of Bergen

A program to investigate currents related to the formation of Antarctic Bottom Water was directed by Dr. Thor Kvinge of the University of Bergen. One of the theories of formation of bottom water calls for a "release" of bottom water on the shelf periodically during the austral winter. To evaluate this theory, Dr. Kvinge installed four buoy systems on the shelf to measure currents and temperature throughout the winter. A schematic of this buoy system is presented in a report by Kvinge (1968) and is reproduced as Figure 2.

University of Connecticut

The zonation of the benthic organisms in the Weddell Sea was studied by Dr. John S. Rankin of the University of Connecticut. Dr. Rankin used epibenthic sleds, anchor dredges, Blake trawls and Van Veen grab samplers. Upon collection, all sediment samples were washed through sieves and the macroscopic organisms were classified and preserved. Preliminary analysis showed two zones: a shallow zone (depths up to 1000 meters) that was characterized by a great number and variety of relatively large animals and a deeper zone that was characterized by few numbers and kinds of relatively small animals. The size of some of the foraminifera was noteworthy, some of them being as large as $\frac{3}{4}$ inch long.

Texas A&M University

Primary productivity was studied in a program under the direction of Dr. Sayed Z. El Sayed of Texas A&M University. This program consisted of the study of:

- a. Light penetration.
- b. Chlorophyll and phaeophytin concentration.
- c. Photosynthesis (C^{14} uptake method).
- d. Phytoplankton and zooplankton (collected with vertical tows).
- e. Quantitative phytoplankton studies by filtering large water samples.

Dr. El Sayed's data indicated conspicuous variations in the productivity of the areas visited. The southwest and western regions of the Weddell Sea were found to be more productive than the central and southern regions.

University of Minnesota

A program to study the population dynamics of Antarctic seals (and penguins) was conducted by Dr. Donald B. Sinniff of the University of Minnesota, Museum of Natural History. Census-taking was achieved by counting the number of seals within $\frac{1}{4}$ mile of the ship for a two hour period at selected times throughout the day. Blood samples were also collected from representative animals and processed for later study. Analysis of the samples by electrophoresis will show if racial differences exist among the wide-spread seal population of the Weddell Sea. Helicopters were used to land on ice floes inhabited by seals; the seals were anesthetized using a dart gun and the blood samples were then drawn.

University of Miami

A program to investigate the microalgae and protozoa of Antarctic pack ice was conducted by Dr. Chum Chi Lee of the University of Miami. Observations and samples were obtained within and under the pack ice by divers and correlated with observations obtained by other investigators.

U.S. Coast Guard Oceanographic Unit

The program conducted by the U.S. Coast Guard Oceanographic Unit included physical oceanographic measurements, nutrient and pH determinations, bottom photography and gravity coring. This program will be discussed in detail later in the paper. Personnel making up the U.S. Coast Guard Oceanographic Unit field part included:

Robert B. Elder, *Oceanographer*.

LT. James M. SEABROOKE, USCG, *Oceanographer*.

SOI-SI James A. WADE, USCG, *Oceanographic Technician*.

SOI-SI John M. MURPHY, USCG, *Oceanographic Technician*.

AGI Peter R. SAN JULE, USCG, *Oceanographic Technician*.

SO2-SI Robert C. MURRELL, USCG, *Oceanographic Technician*.

YN2 Dwight E. OLSON, USCG, *Oceanographic Technician*.

SN Scott B. ROBERTSON, USCG, *Oceanographic Technician*.

IWSOE '68 Cruise Procedure

The International Weddell Sea Oceanographic Expedition, 1968, was scheduled to begin upon termination of USCGC GLACIER's support work at McMurdo Station. The scientific party met CGC GLACIER in Punta Arenas, Chile on 20 January 1968. Departure was delayed until 26 January owing to late arrival of last-minute shipments. While in the Drake Passage, contact with the Argentine Icebreaker GEN. SAN MARTIN was made and it was determined that a rendezvous at Hope Bay would be possible by diverting slightly. Rendezvous was made and various facets of the expedition were discussed. CGC GLACIER departed Hope Bay on 31 January 1968 enroute to 74° S., 40° W., the desired site of the current meter—water sampler buoy installation. It was decided to steam directly to the buoy site without delay to increase the chances that the SRN-9 Satellite Navigation system would be operative and because ice reconnaissance photos indicated that the desired area was free of ice. The time was also used for

the various investigators to set up their equipment. An initial bathymetric survey of the buoy site was conducted to determine the general bottom characteristics and to make sure that the buoys would not be set in a depression. Upon completion of the bottom survey four buoys were set. Details of the buoy installation procedure are given by Kvinge (1968).

Upon completion of the buoy installation, occupation of oceanographic stations was begun to obtain data in the areas of the Weddell Sea ordinarily inaccessible. It was believed that ice conditions during the austral summer of 1967-1968 were lighter than usual. Therefore, areas which would be impenetrable or very difficult to penetrate under normal ice conditions were given the highest priority of study. When the ice became so heavy that the ship's progress was slowed greatly (to about 3 knots), lighter ice was sought. With the exception of a run to Halley Bay because of a medical emergency, this procedure was carried out throughout the cruise.

Station Procedure

The initial procedure followed by the ship upon arriving on station depended largely on ice conditions. The difficulty in setting the ship properly for station was generally inversely proportional to the ice concentration. In heavy concentrated ice it was usually possible to ease into an opening in the ice and allow the wind to hold the ship against the downwind side.

Most of the time, there would not be enough ice dislodged to cause any problems after the first few minutes. In less concentrated ice the same procedures were attempted, but difficulties arose when the ice was not firm enough to keep the ship from drifting through the ice. Frequently under these circumstances, blocks of dislodged ice converged in the wake

or windward side of the ship and caused problems with any gear over the side. Possibly the ice conditions which were most hazardous to oceanographic equipment were in open pack ice where the ice and the ship were free to drift independently. Under these conditions it was impossible to predict when floes would drift in and tangle or break the oceanographic cable. The best solution was to try to find open areas where the ship could drift free of ice long enough to complete a cast, then reposition the ship before starting another cast. Late in the survey, a 10' by 10' coffer dam was built of ten inch square timbers. It was floated underneath the platform and the casts were lowered through it. It was initially designed to keep brash ice (up to the size that might trip a Nansen bottle) away from the cable. On occasion, however, it kept out rather large floes under considerable pressure.

In the cases where the ship's movement into an area might have disturbed the surface water measurements, observations of other than surface phenomena were made first so

that surface conditions could return to more nearly normal before measurement.

Although station plans were constantly changing owing to a number of circumstances, there were generally two station types: a somewhat abbreviated station taken near local apparent noon, and a more complete or major station taken at night. The local apparent noon station usually consisted of a secchi disc observation, submarine photometer observations, a combined vertical zoo-phytoplankton tow, water sampling from six levels (using "Van Dorn" sampling bottles), and a Nansen bottle cast to 1000 meters. The major station, occupied at night to make optimum use of the dark hours when the ship's progress would be slowed or stopped, usually consisted of two overlapping Nansen cast (one from surface to about 1000 meters, and the other from about 1000 meters to the bottom), a cast to obtain samples for chlorophyll analysis, a vertical plankton tow, an STD cast, and either bottom cores or photography. In addition to the two main types of stations, a trawl or dredge station was occupied when ice conditions allowed.

Data Acquisition And Initial Analysis Methods

Nansen Casts

Teflon-lined Nansen bottles were used throughout the cruise. All bottles were equipped with two protected reversing thermometers and at approximately alternate depths below 200 meters with unprotected thermometers. Nominal sampling depths were 0, 10, 25, 50, 75, 100, 150, 200, 300, 400, 500, 600, 700, 800, 1000, 1250 and 1500 meters and at 300 meter intervals below that. Several bottles were placed at 25 meter intervals near the bottom to determine whether any changes in the water structure might occur at that level. These depths were frequently modified to provide more optimum sampling. Two overlapping Nansen casts were generally required to obtain samples from the surface to the bottom. The shallower cast was generally from 0 to 1000 meters and the deeper cast from 1000 meters to the bottom. A pinger was used to aid in sampling near the bottom. In the cases where the ship was firmly held by the ice, a zero

wire angle was generally obtained which made it possible to obtain samples within a few meters of the bottom.

Temperature Data

Standard analysis procedures for correcting thermometers and determining thermometric and accepted depths were used. Use of the shipboard computer made quick, accurate data analysis possible and thus allowed prompt response to any conditions that might indicate that a change in sampling procedure was desirable.

Salinity Determination

Salinity was determined using an inductive type salinometer. Final calculations of salinity were made by computer. Shipboard quality control of salinity and temperature data included examination of T-S plots for distribution of stability and agreement with historical norms.

Nutrient Analysis

At the beginning of the cruise, phosphates, nitrates, and silicates were determined aboard ship using the methods described by Strickland and Parsons (1965). Unfortunately, the spectrophotometer purchased for the ship became inoperative. The spare instrument from the U.S. Coast Guard Oceanographic Unit was also inoperative owing to damage in shipment. Consequently, the samples were frozen for the remainder of the cruise. Frozen samples were returned to the U.S. Coast Guard Oceanographic Unit to determine nitrates, nitrites, silicates, phosphates and ammonia. Some of these samples were ruined by freezer malfunction. Consequently, nitrite determinations from stations 030 to 060 and all nutrient data from stations 043 to 060 were invalid.

Oxygen

The amount of dissolved oxygen was determined on all samples using a modified (Strickland and Parsons, 1965) Winkler method.

Salinity-Temperature-Depth System (STD)

The STD was used at the major stations to obtain a continuous profile of temperature and salinity with depth. When deep STD and Nansen casts were taken at the same station, the STD cast was usually terminated at about 2000 meters depth. This saved time, yet allowed all the important inflection points (except any that occurred very near the bottom) to be observed. A single Nansen bottle was attached to the STD cable just above the underwater unit so that quality control and calibration of the STD data could be accomplished.

Bottom Cores

Bottom cores were obtained by using two gravity corers attached to a bridle to permit simultaneous lowering. The arrangement worked quite well. Core lengths averaged about three feet. The cores were retained in the plastic core liners and were then coated with wax and stored upright in cold storage.

Bottom Photography

A Thorndike (1959) type bottom contact camera was used for bottom photographs. Both Plus-X black and white film and high speed color film were used. The camera system was set so that a photograph was taken with the camera lens about three feet above the bottom and at an angle of approximately sixty degrees from the vertical. The strobe light was attached beneath the camera and oriented at about the same angle as the camera. This resulted in a close-up of the bottom at an oblique angle which gave somewhat of a three-dimensional effect because of shadows. The ship's photographer was able to develop both types of film. The results of the bottom photography are presented in a paper by Hollister and Elder (1969).

Vertical Plankton Tow

Two $\frac{1}{4}$ meter nets were used simultaneously to obtain plankton samples. One of the nets had a mesh size suitable for zooplankton and the other a mesh size suitable for phytoplankton. These were lowered to 200 meters. Lowering and retrieving rates were approximately 20 meters per minute.

Productivity and Chlorophyll

Although chlorophyll content was not measured continuously, as was originally planned, it was measured frequently by obtaining samples with a bucket. Samples at depths governed by various levels of incident radiation were obtained using Van Dorn bottles. Because of loss of bottles through damage, two casts were required to obtain six near-surface samples. These were obtained at local apparent noon at depths of 100, 60, 23, 11 and 2 percent of incident light penetration plus two other depths selected for other reasons. A secchi disc was used to determine light extinction. A submarine photometer was also used from time to time as a further measurement of light penetration.

Results of Analysis

Sixty-one oceanographic stations were taken by USCGC GLACIER during IWSOE '68. Four sections through these stations were selected for analysis (fig. 3). Vertical distribution of

sigma-t, temperature, salinity and oxygen content were determined for these sections and are reproduced in Figures 4-19.

Analysis of the data indicate that two main

water masses mixed to form Antarctic Bottom Water. These were the cold ($< -1.9^{\circ}\text{C.}$) saline ($>34.60\text{‰}$) water which was found on the continental shelf below about 200 meters and the Warm Deep Layer ($>0.2^{\circ}\text{C.}$ and $>34.67\text{‰}$, based on IWSOE data) which was found from about 500 to 1000 meters depth off the shelf (Sections B and C). These two water masses met at the upper part of the continental slope.

Seaward of the continental shelf, mixing and sinking of dense shelf water and Warm Deep Layer water are clearly indicated. Sections A, B and C (fig. 4-15) show this, particularly in the vicinity of stations 18 and 25. Further mixing at depth is also made apparent by the sigma-t distributions. The 27.85 and 27.86 isopycnals plotted on the temperature cross sections illustrate this (figs. 4, 8, 12 and 16) as do the isentropic analyses of the temperature distribution on the 27.85 and 27.86 sigma-t surfaces.

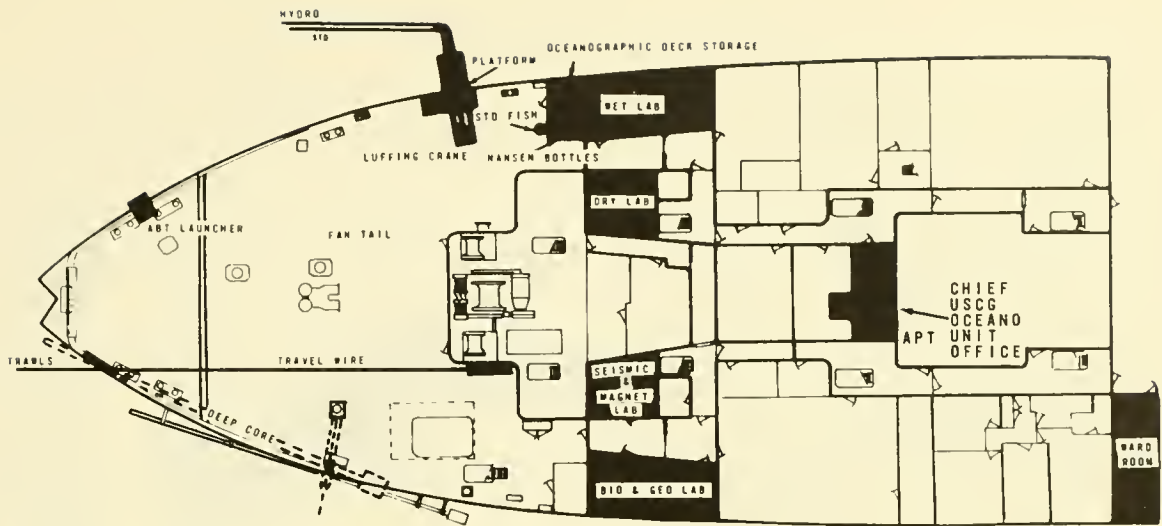
The primary conclusion reached as a result of the data analyses is that water of sufficient density to mix with the Warm Deep Layer and form Antarctic Bottom Water was being formed during the austral summer in the

Southwestern Weddell Sea. The data indicate that this dense shelf water was not formed at the air-sea interface nor was it formed elsewhere and transported into the Southwestern Weddell Sea area. Its presence during the summer can not be explained as winter-formed water entrapped by bottom topography since the area is quite flat and can not prevent water from flowing off the shelf (fig. 24). Consequently, it is concluded that the most logical method of formation is the mechanism described by Lusquinos (1963). This method of formation requires that the dense shelf water attain its temperature-salinity characteristics by interaction with the extensive ice shelf in the Southwestern Weddell Sea. The temperature of the water is reduced, the salinity is increased due to freezing and the density of the water is therefore increased. Thus the cold dense shelf water is formed on a continuous basis and subsequently mixes with warm deep water to form Antarctic Bottom Water.

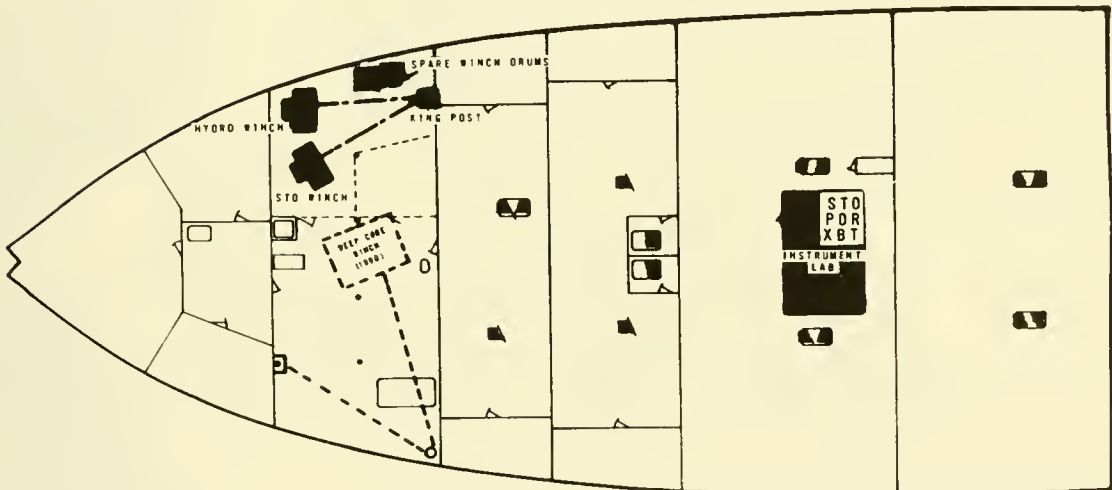
These data as well as additional data collected during IWSOE '69 are presently being analysed in detail and the results will be published in the near future.

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**MAIN DECK AFT
OCEANOGRAPHIC SPACES**



SECOND DECK AFT

Figure 1. USCGC GLACIER (WAGB 4) oceanographic alterations.

BUOY STATION

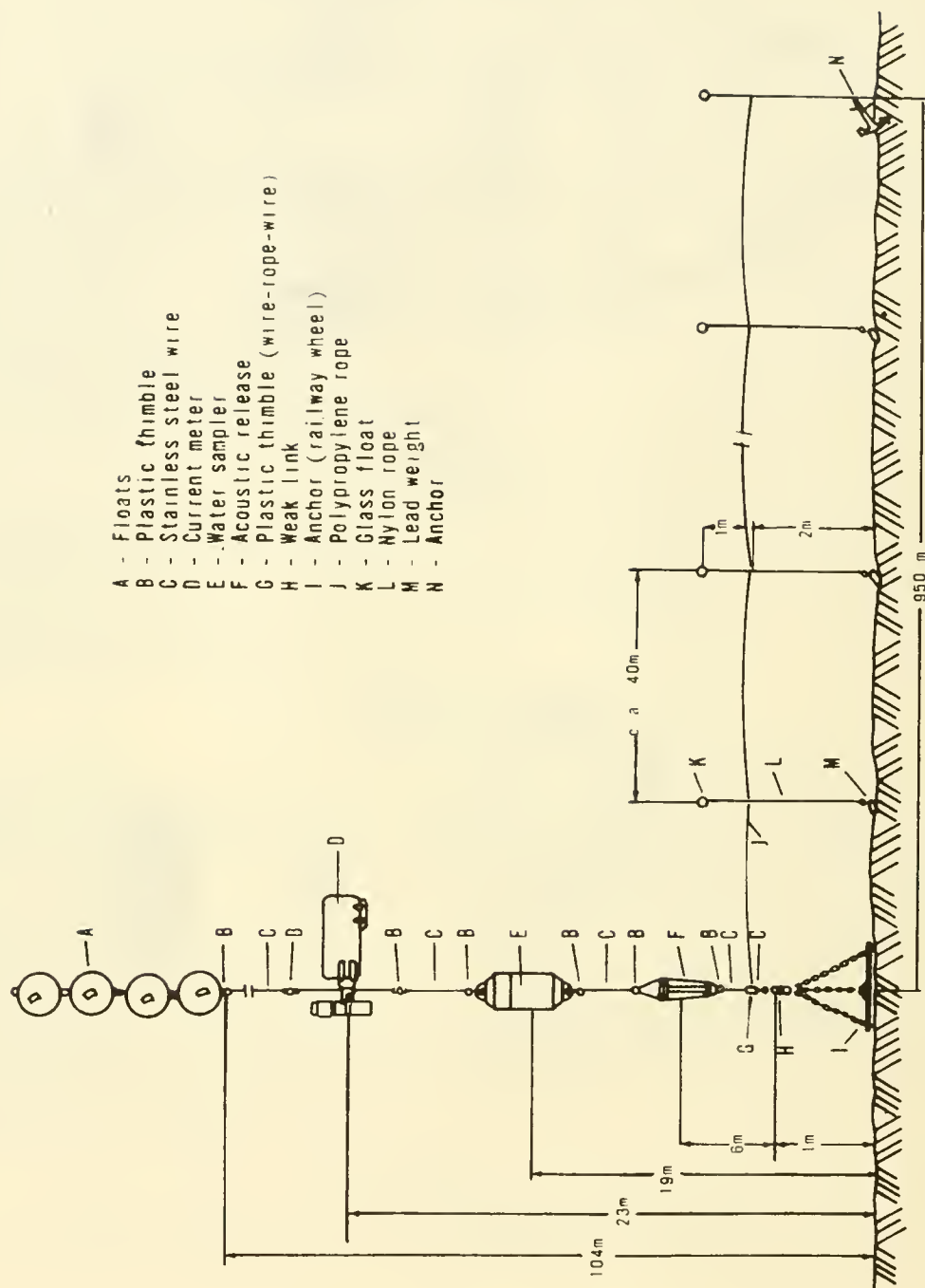


Figure 2. University of Bergen current meter system. After Kvinge, 1968.

STATION LOCATION CHART - IWSOE 1968

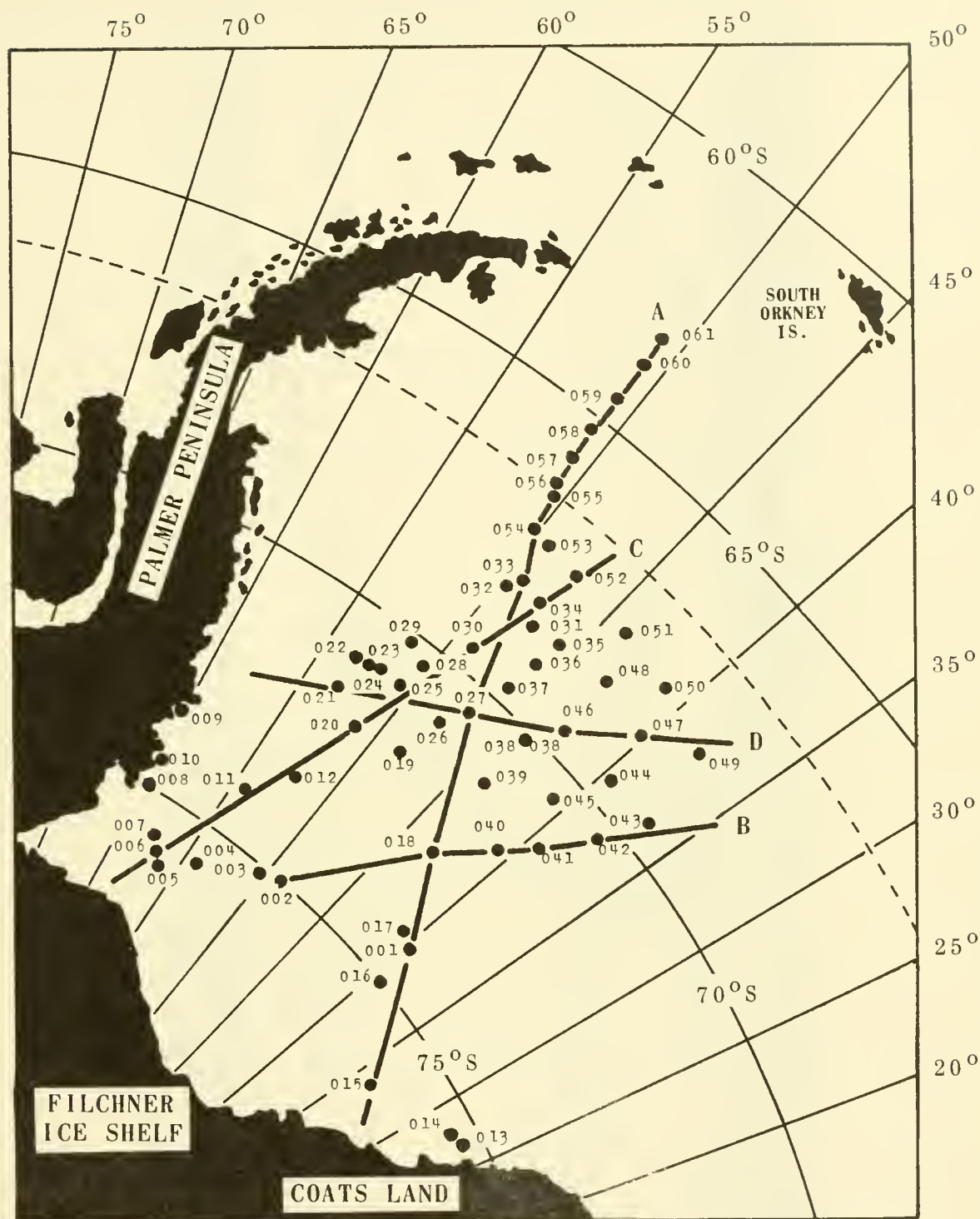


Figure 3. Locations of stations and sections for the 1968 International Weddell Sea Oceanographic Expedition.

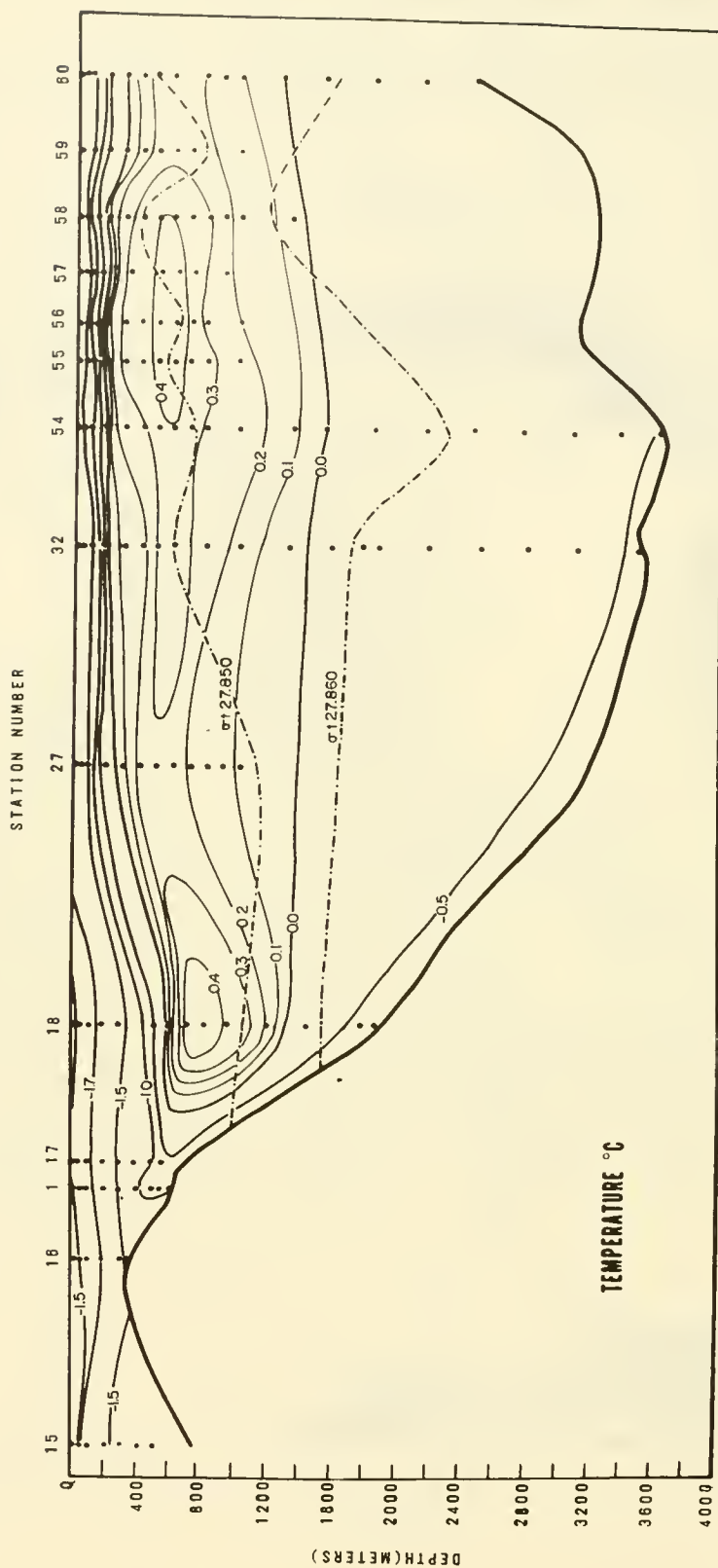


Figure 4. Vertical distribution of temperature ($^{\circ}\text{C}$) with selected isopycnals (σ_t , in g/l) along Section A. Contour intervals are 0.1°C in the 0.0 to 0.4°C range, 0.5°C in the 0.0 to -1.5°C range, and 0.2°C in the -1.5 to -1.7°C range.

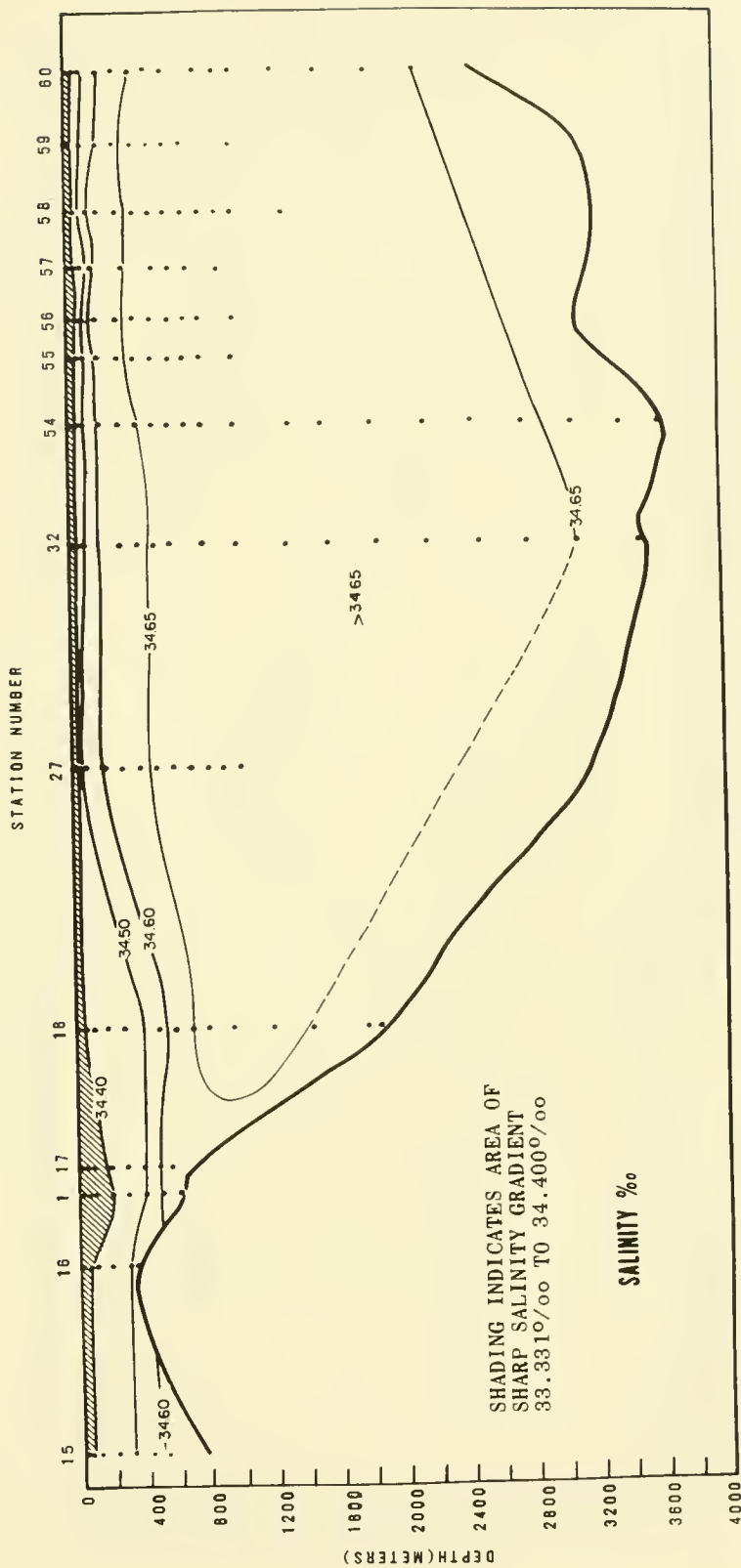


Figure 5. Vertical distribution of salinity (‰) along Section A. Values less than 34.40 ‰ not contoured. Shading indicates area of sharp salinity gradient (33.331 ‰ to 34.400 ‰).

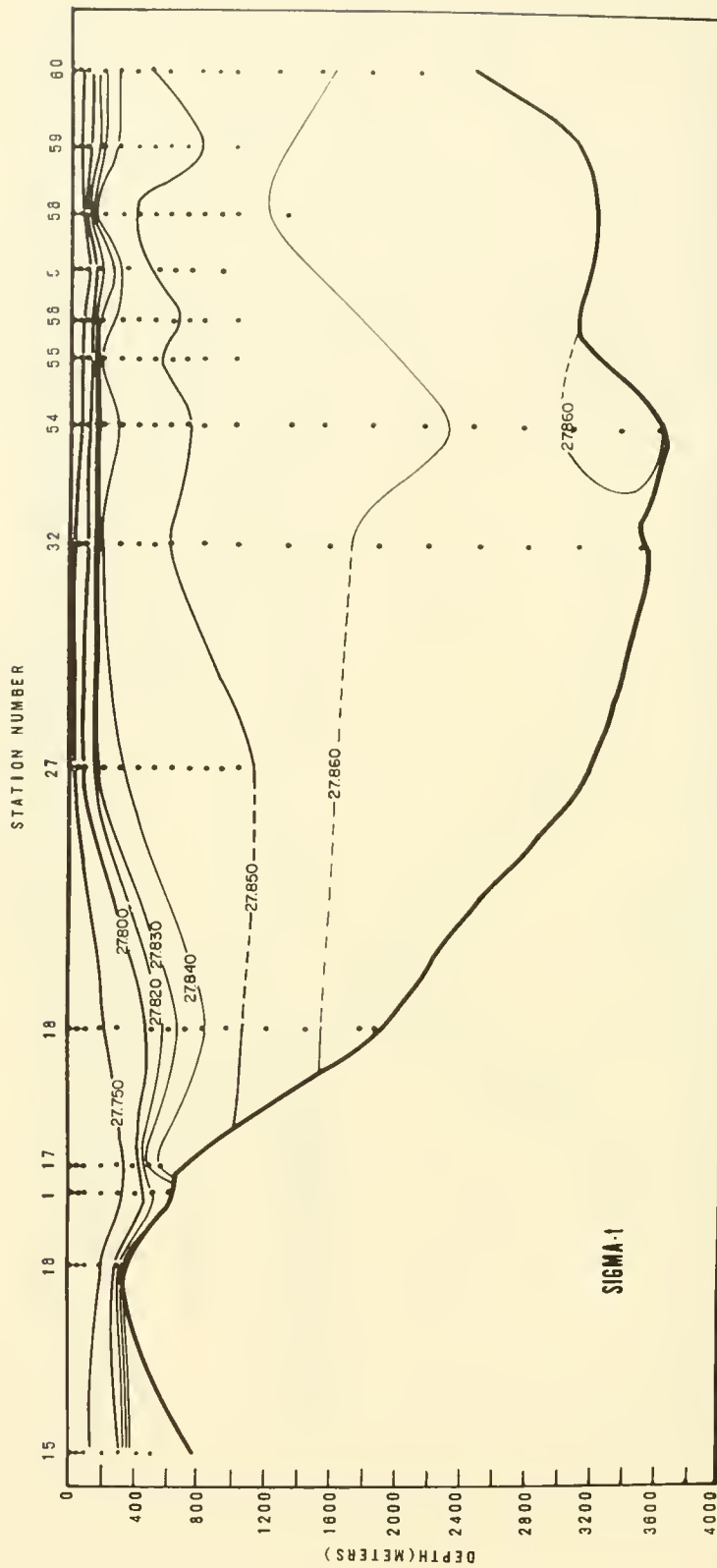


Figure 6. Vertical distribution of density (σ_t , in g/l) along Section A. Values less than 27.750 g/l not contoured.

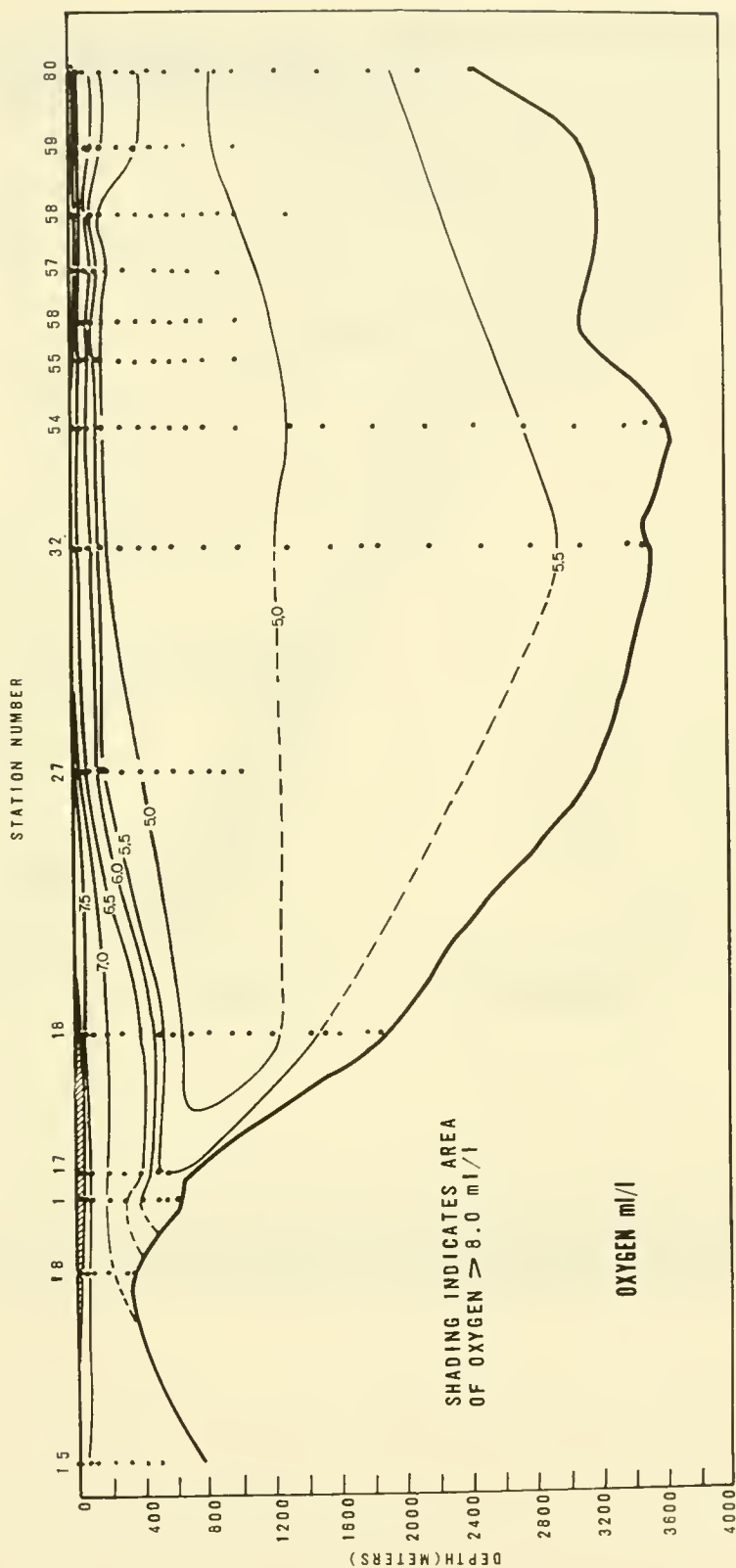


Figure 7. Vertical distribution of dissolved oxygen (ml/l) along Section A. Shading indicates area of oxygen greater than 8.0 ml/l.

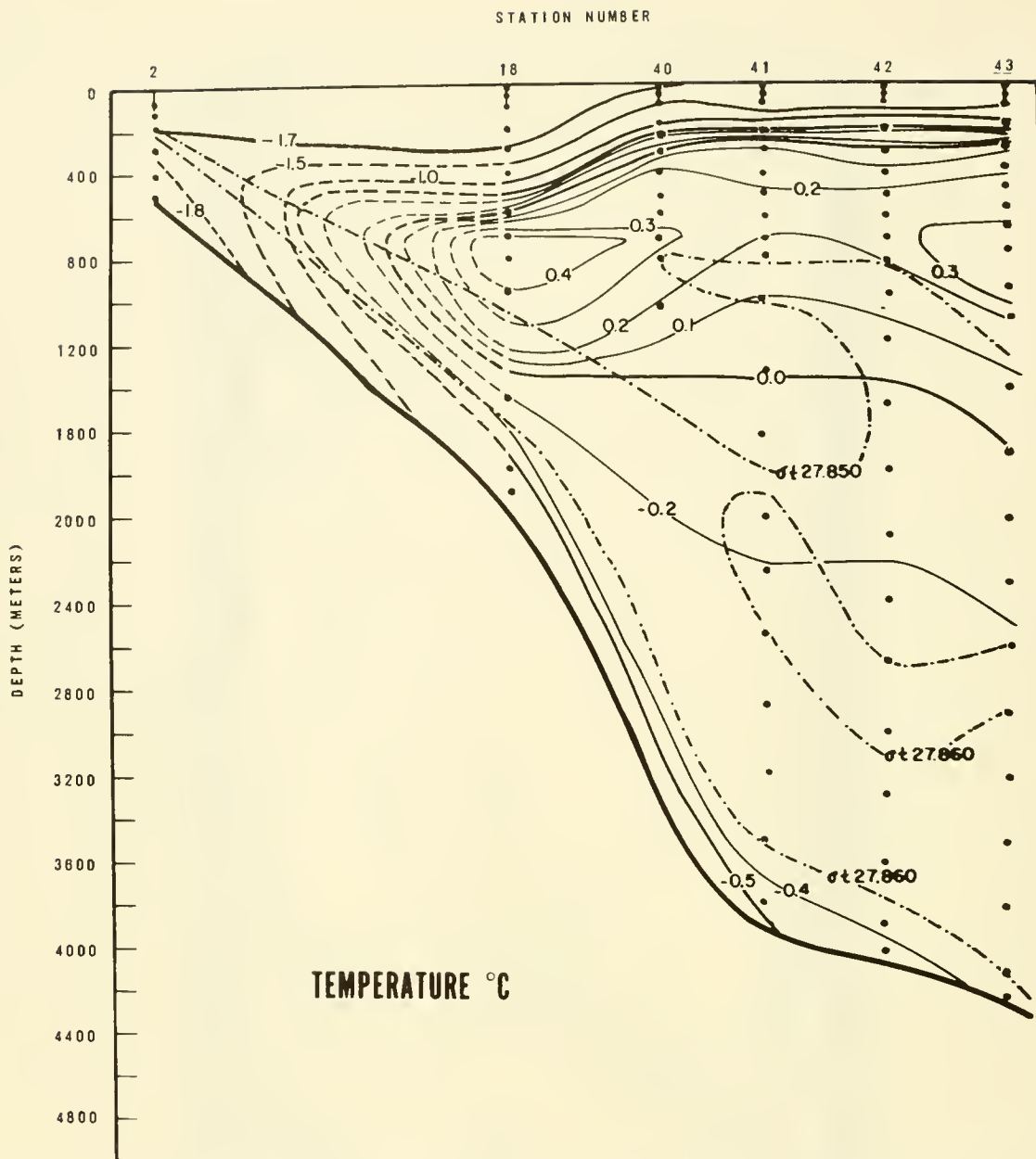


Figure 8. Vertical distribution of temperature ($^{\circ}\text{C}$) with selected isopycnals (σ_t in g/l) along Section B. Contour intervals are 0.1°C in the -0.4 to -0.5°C and 0.0 to 0.4°C ranges, 0.2°C in the -1.5 to -1.7°C and -0.4 to 0.0°C ranges and 0.5°C in the -1.5 to -0.5°C range.

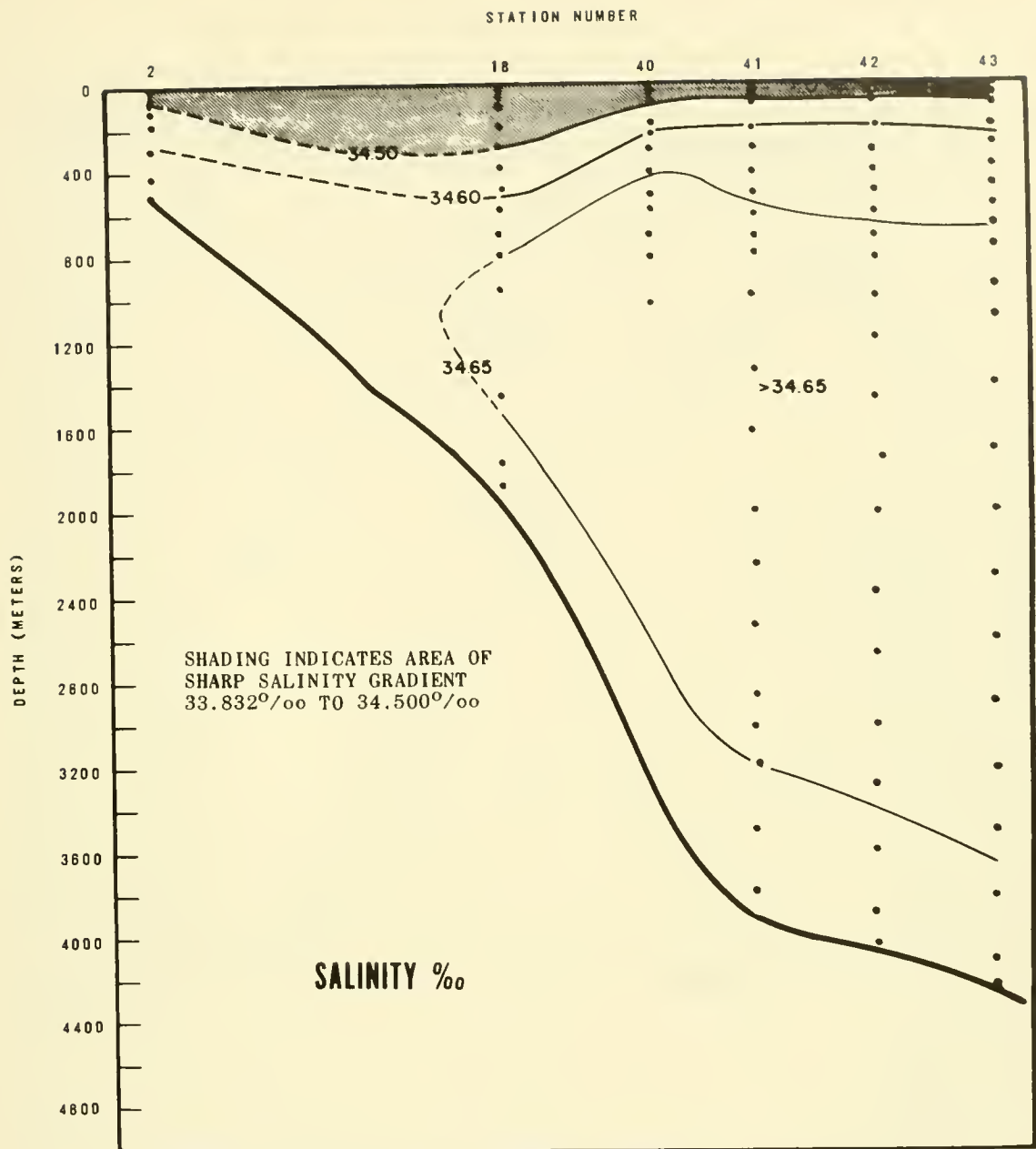


Figure 9. Vertical distribution of salinity (‰) along Section B. Values less than 34.50 ‰ not contoured. Shading indicates area of sharp salinity gradient (33.832 ‰ to 34.500 ‰).

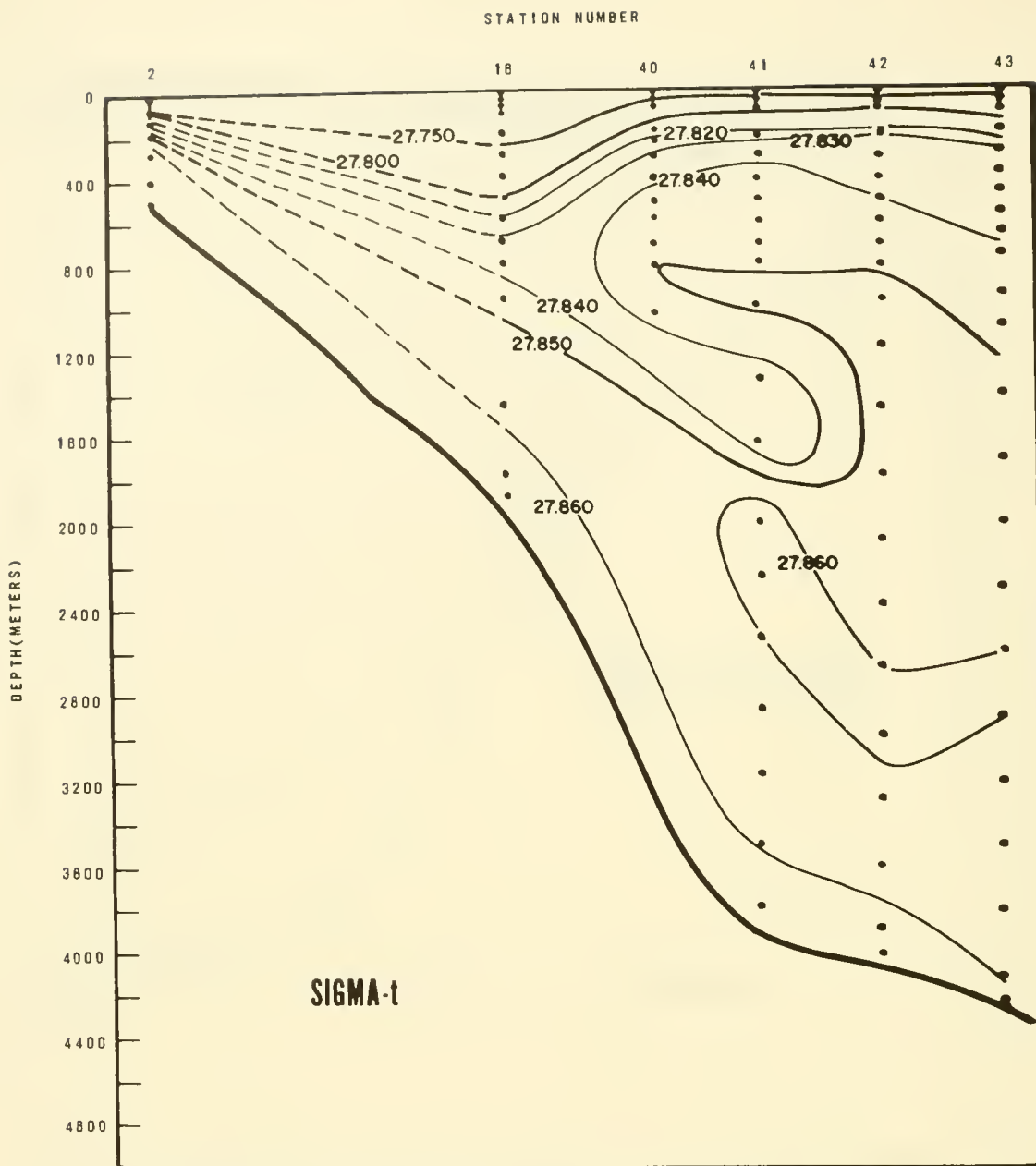


Figure 10. Vertical distribution of density (σ_t , in g/l) along Section B. Values less than 27.750 g/l not contoured.

STATION NUMBER

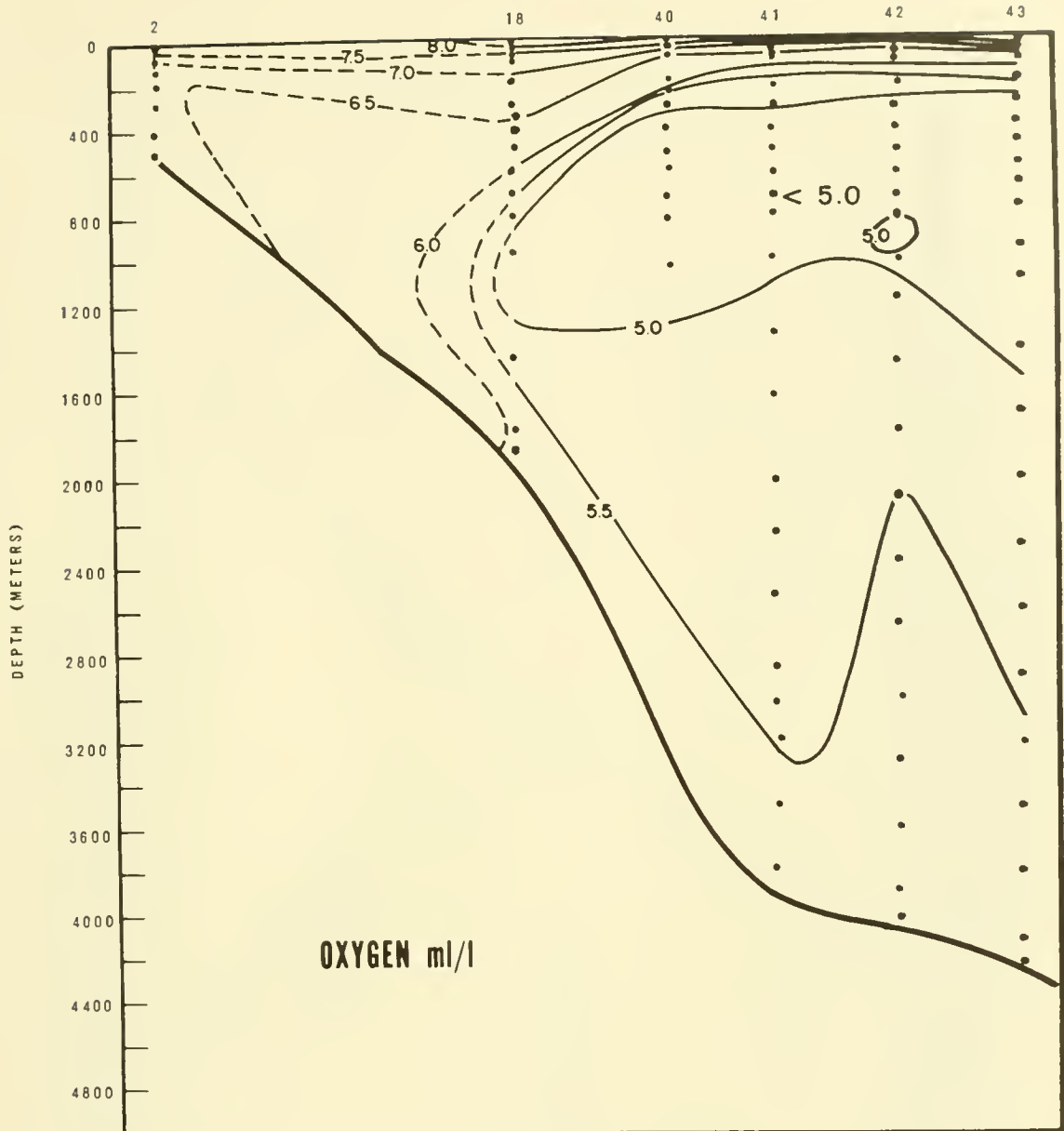


Figure 11. Vertical distribution of dissolved oxygen (ml/l) along Section B.

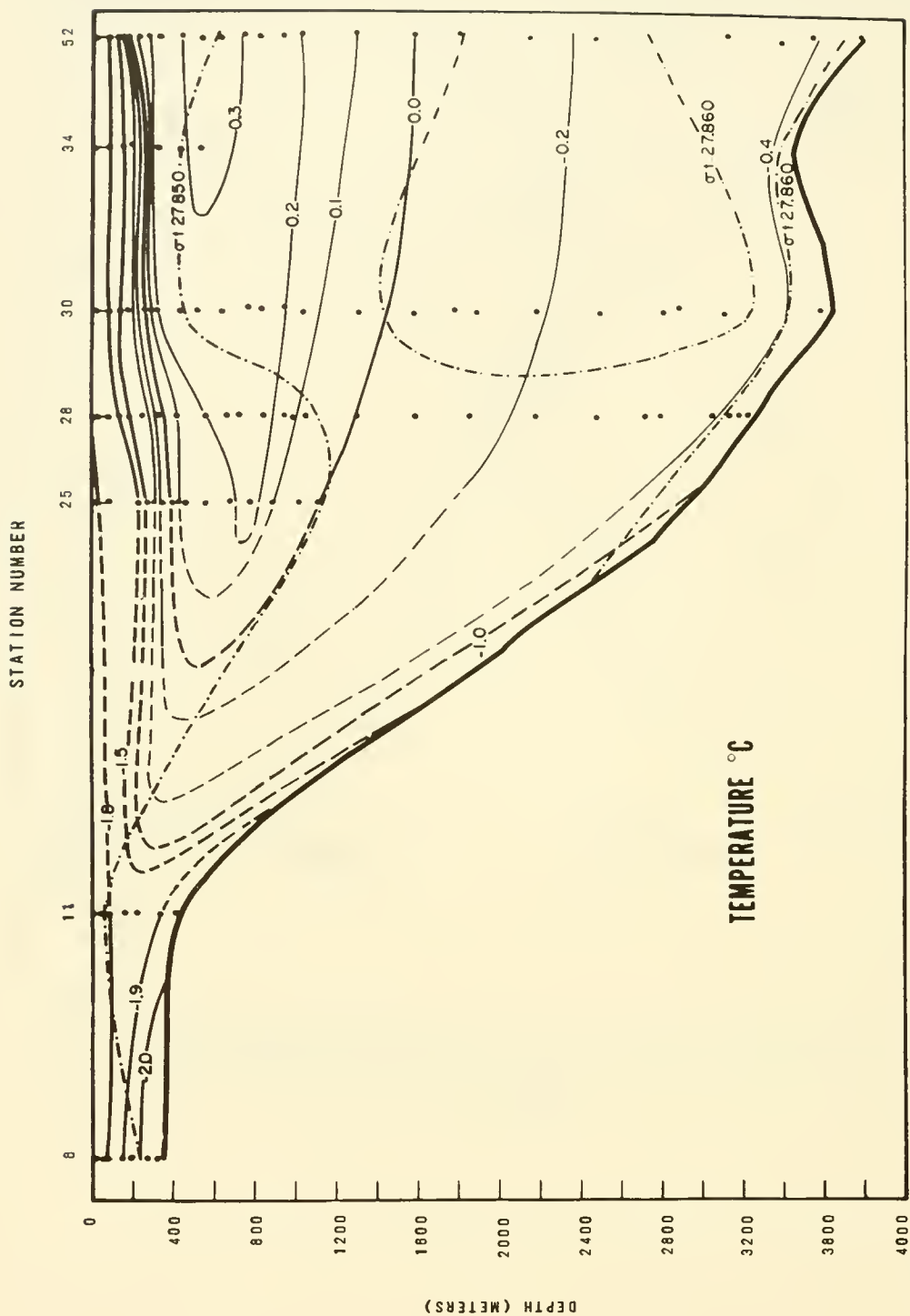


Figure 12. Vertical distribution of temperature ($^\circ\text{C}$) with selected isopycnals (σ_t , in g/l) along Section C. Contour intervals are 0.1°C in the 0.0 to 0.3°C range, 0.2°C in the 0.0 to -0.4°C range, 0.6°C in the -0.4 to -1.0°C range, 0.5°C in the -1.0 to -1.5°C range, 0.3°C in the -1.5 to -1.8°C range and 0.1°C in the -1.8 to -2.0°C range.

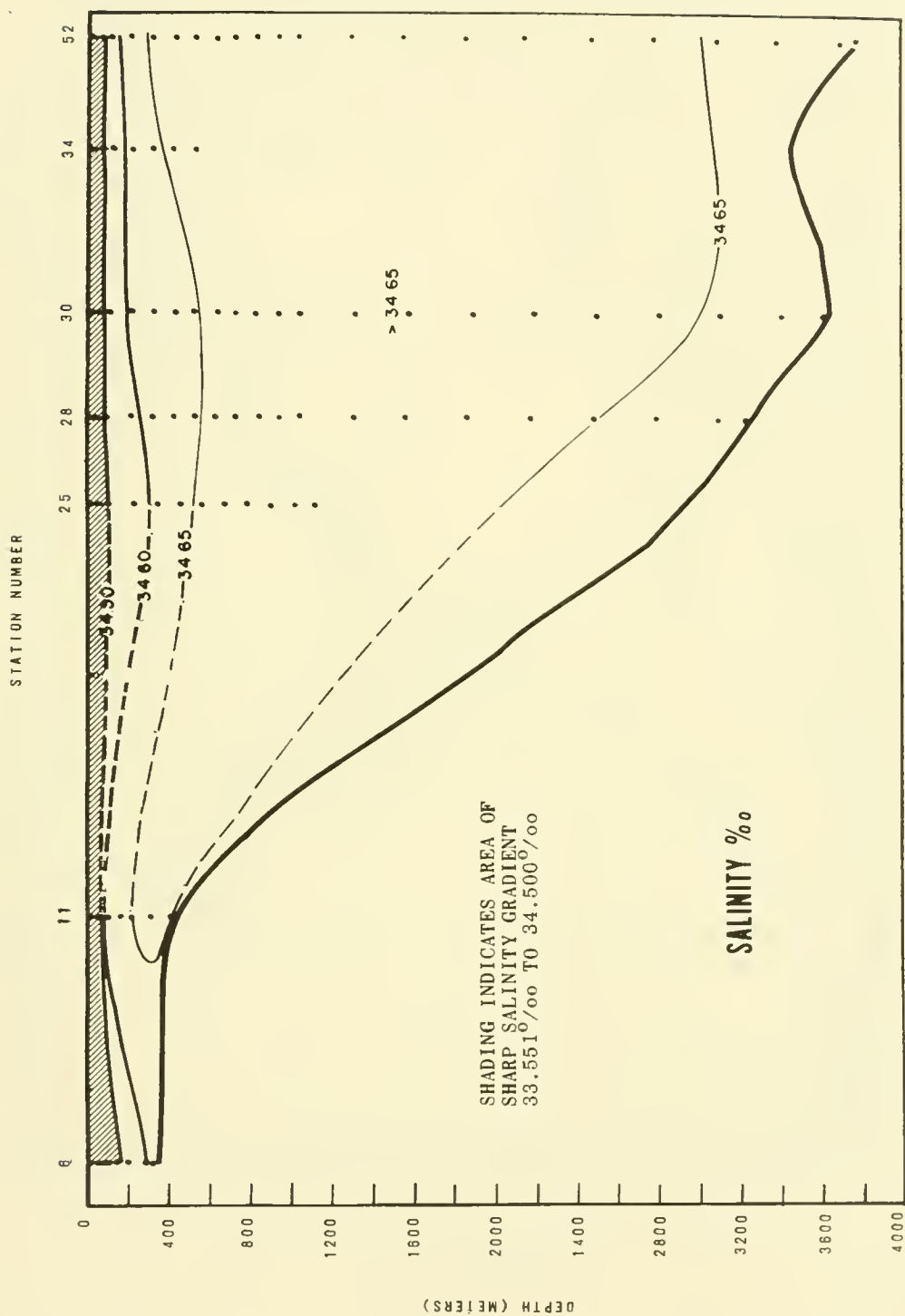


Figure 13. Vertical distribution of salinity (‰) along Section C. Values less than 34.50 ‰ not contoured. Shading indicates area of sharp salinity gradient (33.551 ‰ to 34.500 ‰).

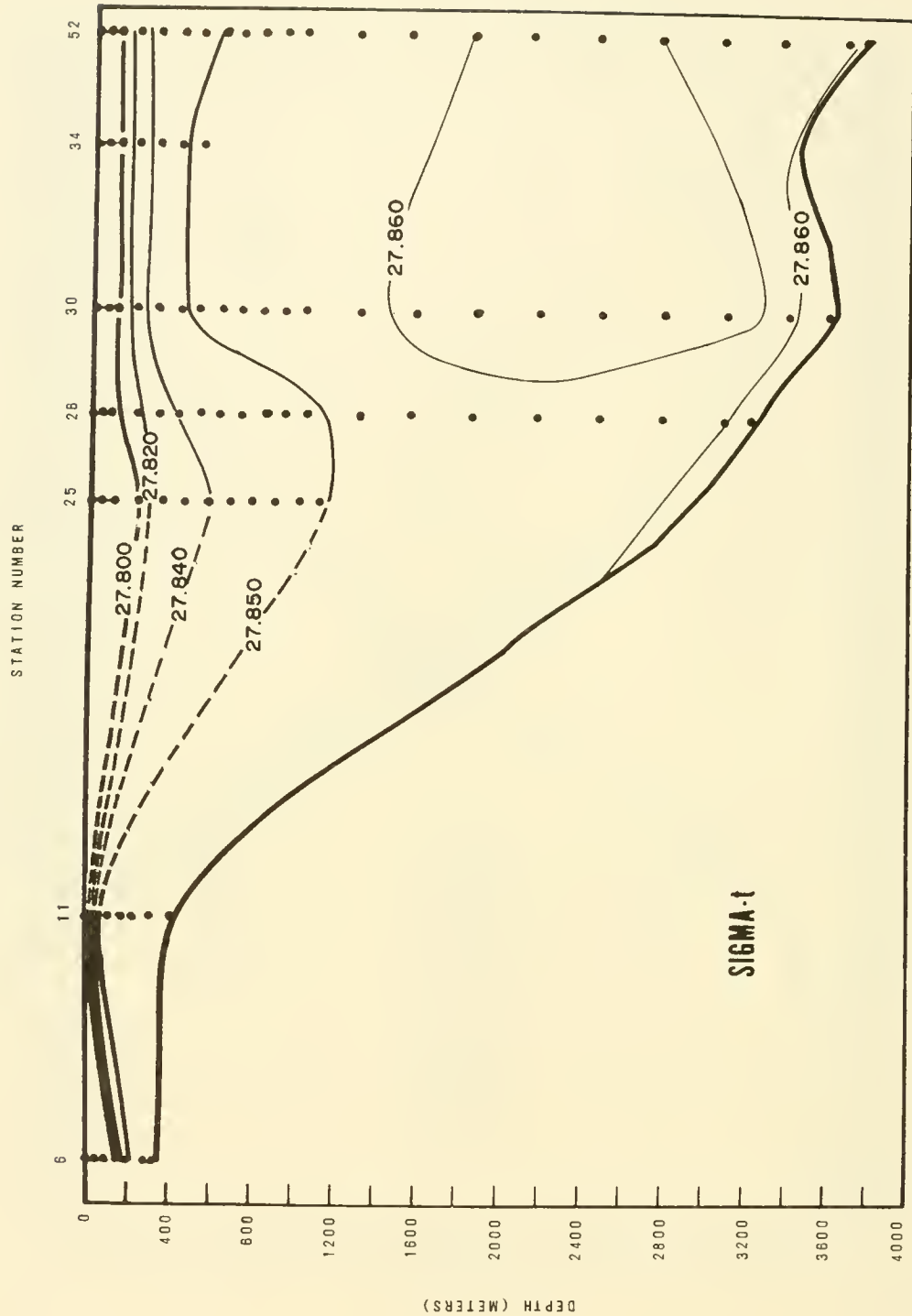


Figure 14. Vertical distribution of density (σ_t , in g/l) along Section C. Values less than 27.800 g/l not contoured.

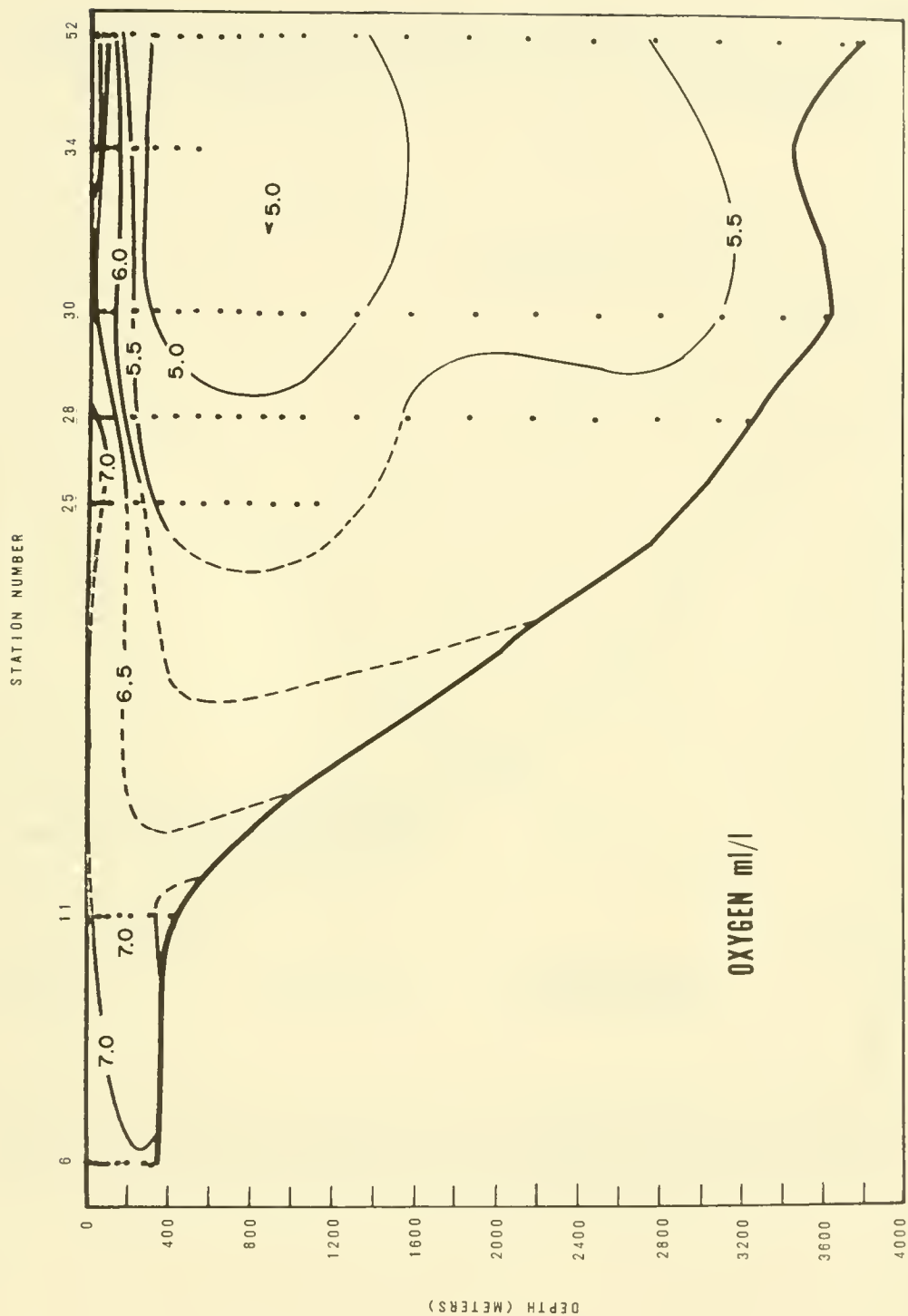


Figure 15. Vertical distribution of dissolved oxygen (ml/l) along Section C.

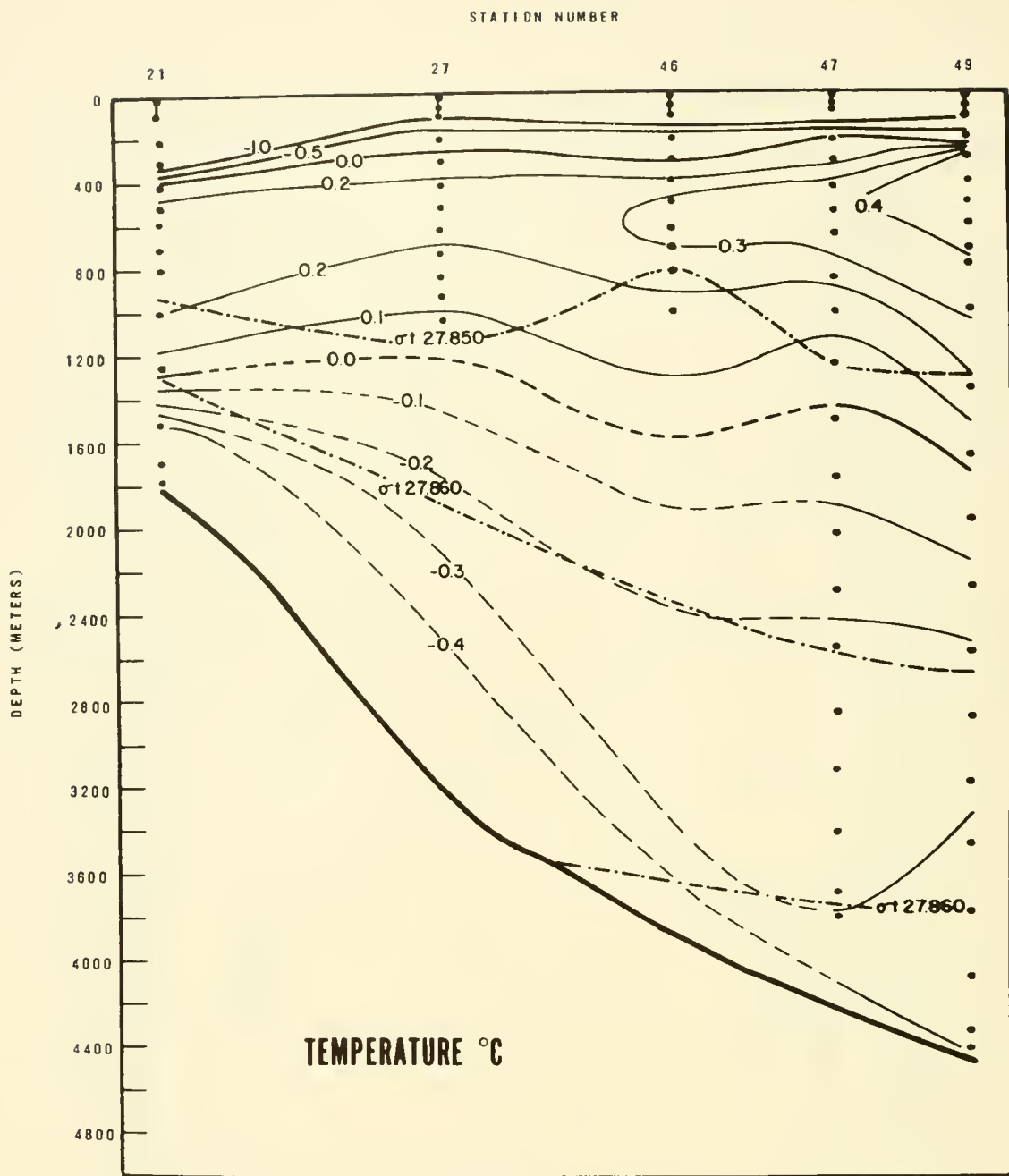


Figure 16. Vertical distribution of temperature ($^{\circ}\text{C}$) with selected isopycnals (σ_t , in g/l) along Section D.

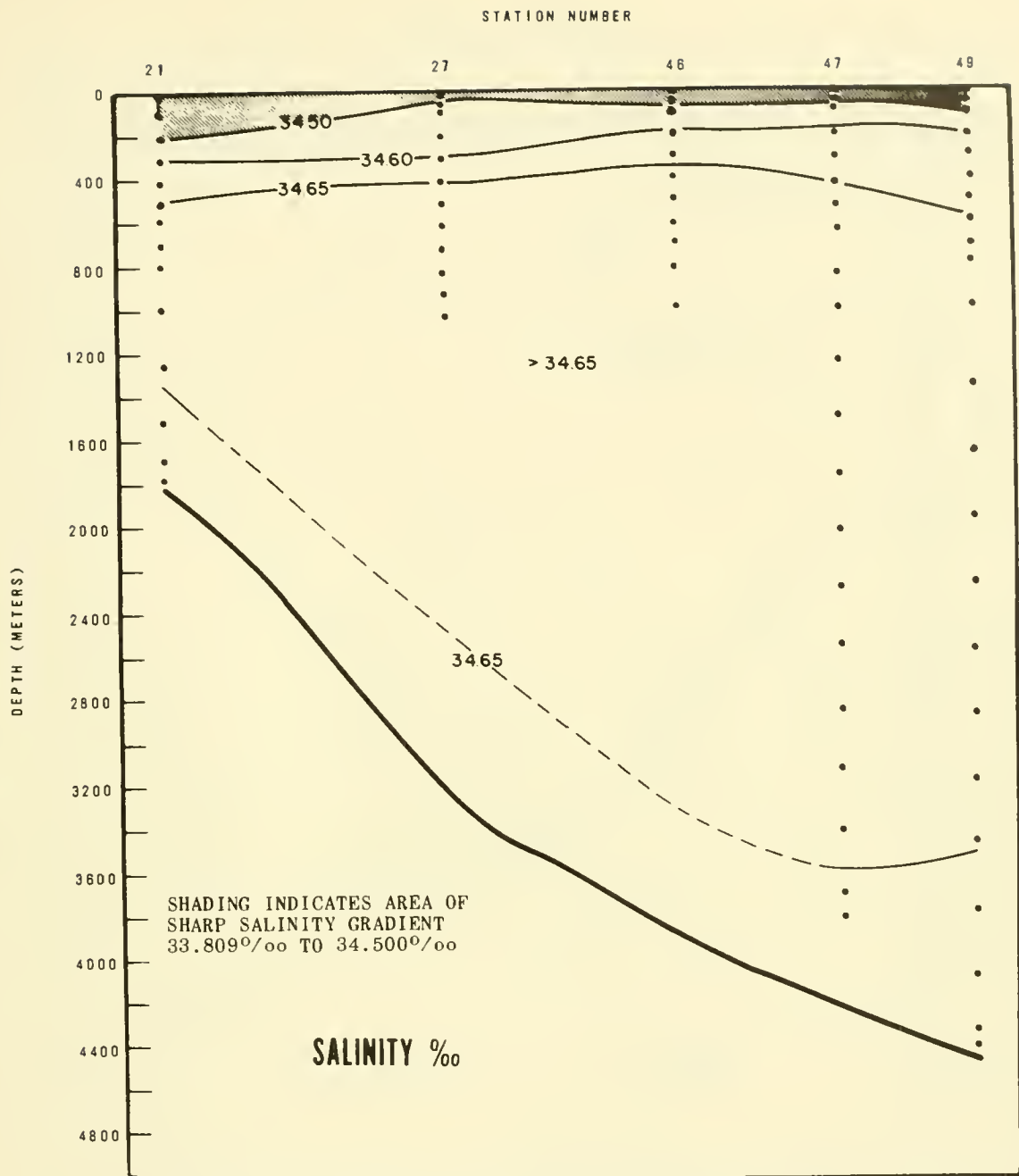


Figure 17. Vertical distribution of salinity (‰) along Section D. Values less than 34.50 ‰ not contoured. Shading indicates area of sharp salinity gradient (33.809 ‰ to 34.500 ‰).

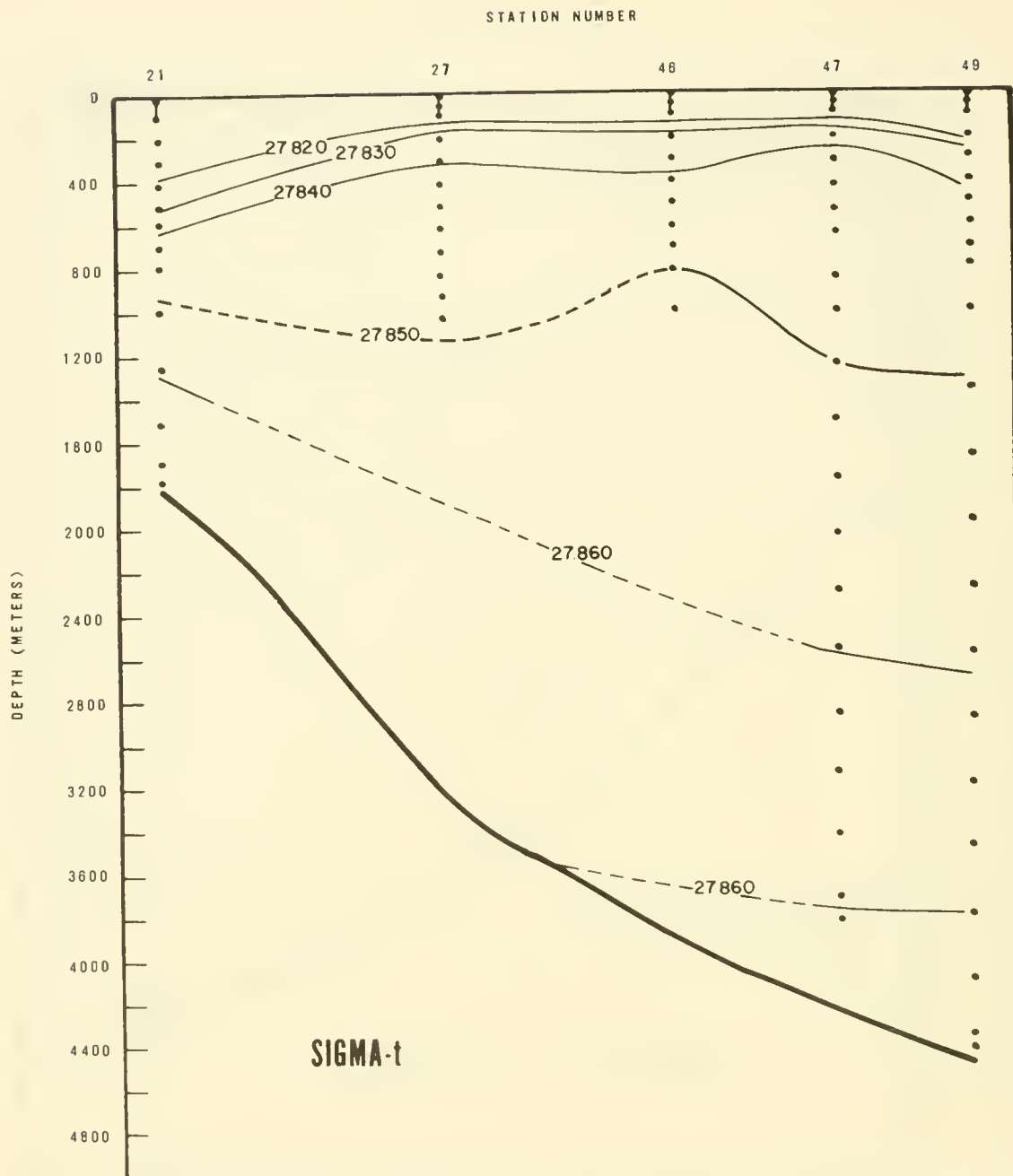
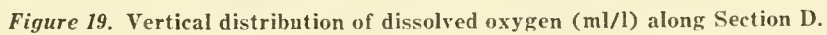


Figure 18. Vertical distribution of density (σ_t , in g/l) along Section D. Values less than 27.820 g/l not contoured.



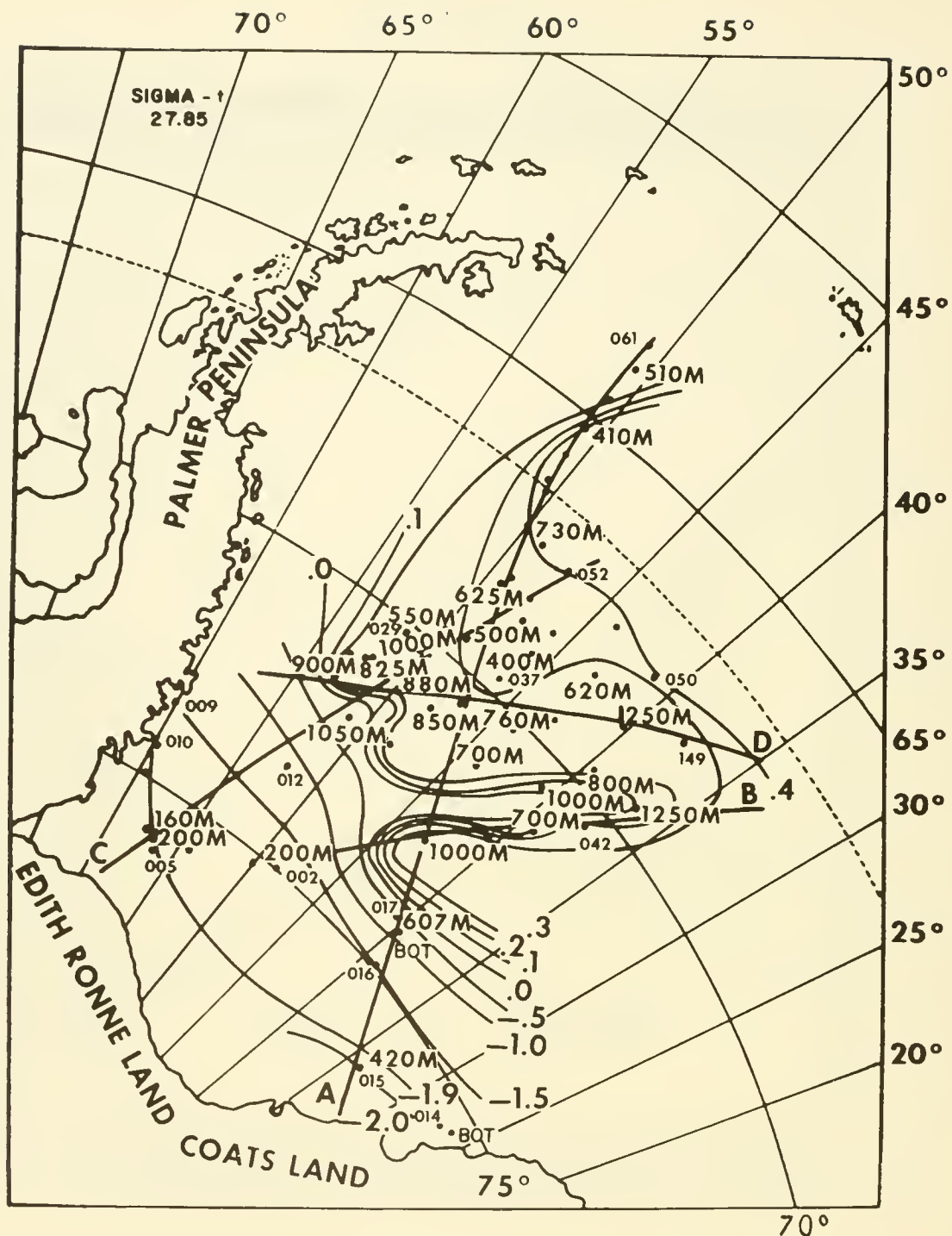


Figure 20. Distribution of temperature on the 27.85 g/l constant density (σ_t) surface, with point values of depth of the surface.

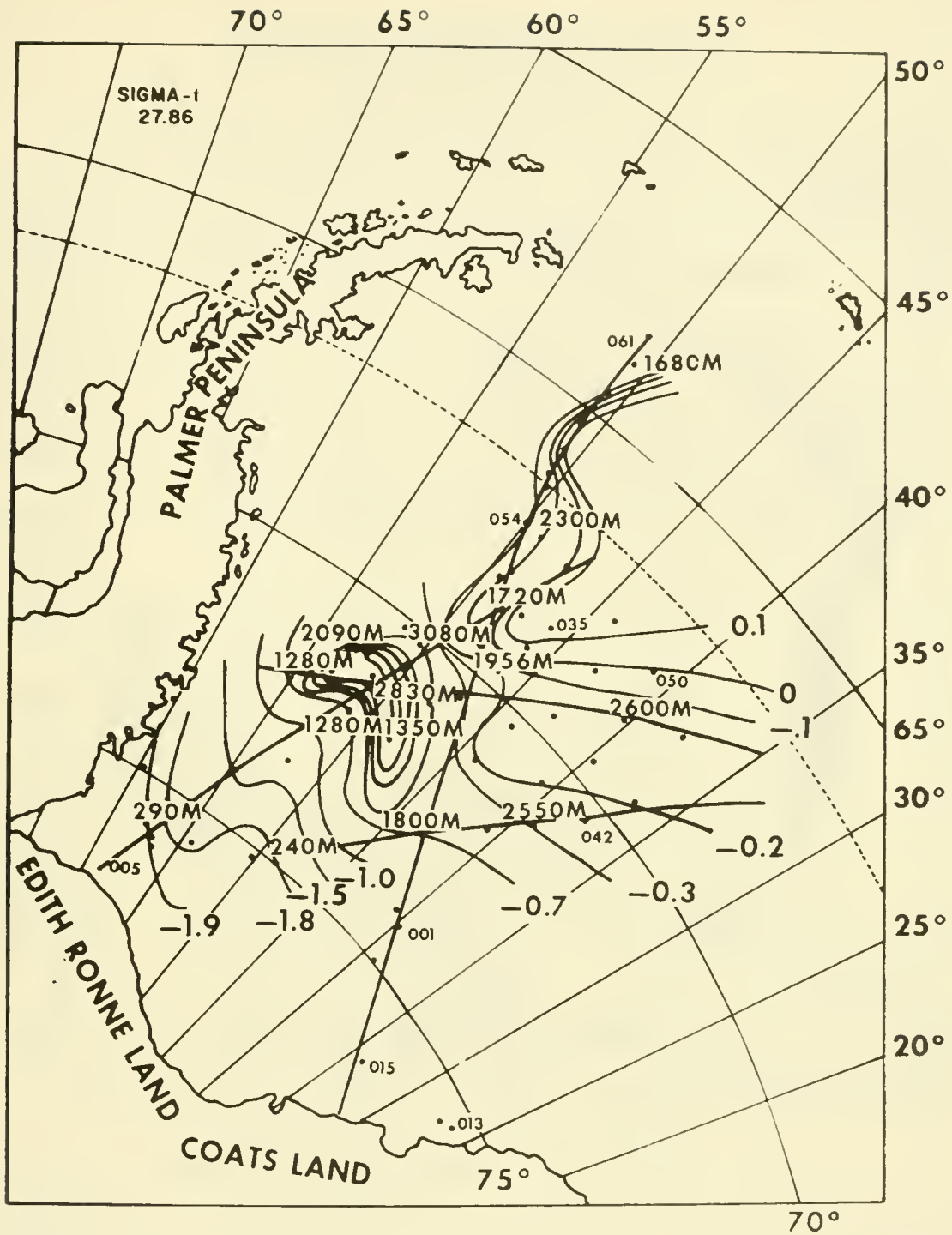


Figure 21. Distribution of temperature on the 27.86 g/l constant density (σ_t) surface, with point values of depth of the surface.

WEDDELL SEA BOTTOM TOPOGRAPHY

(prepared by Dr. Thor Kvinge)

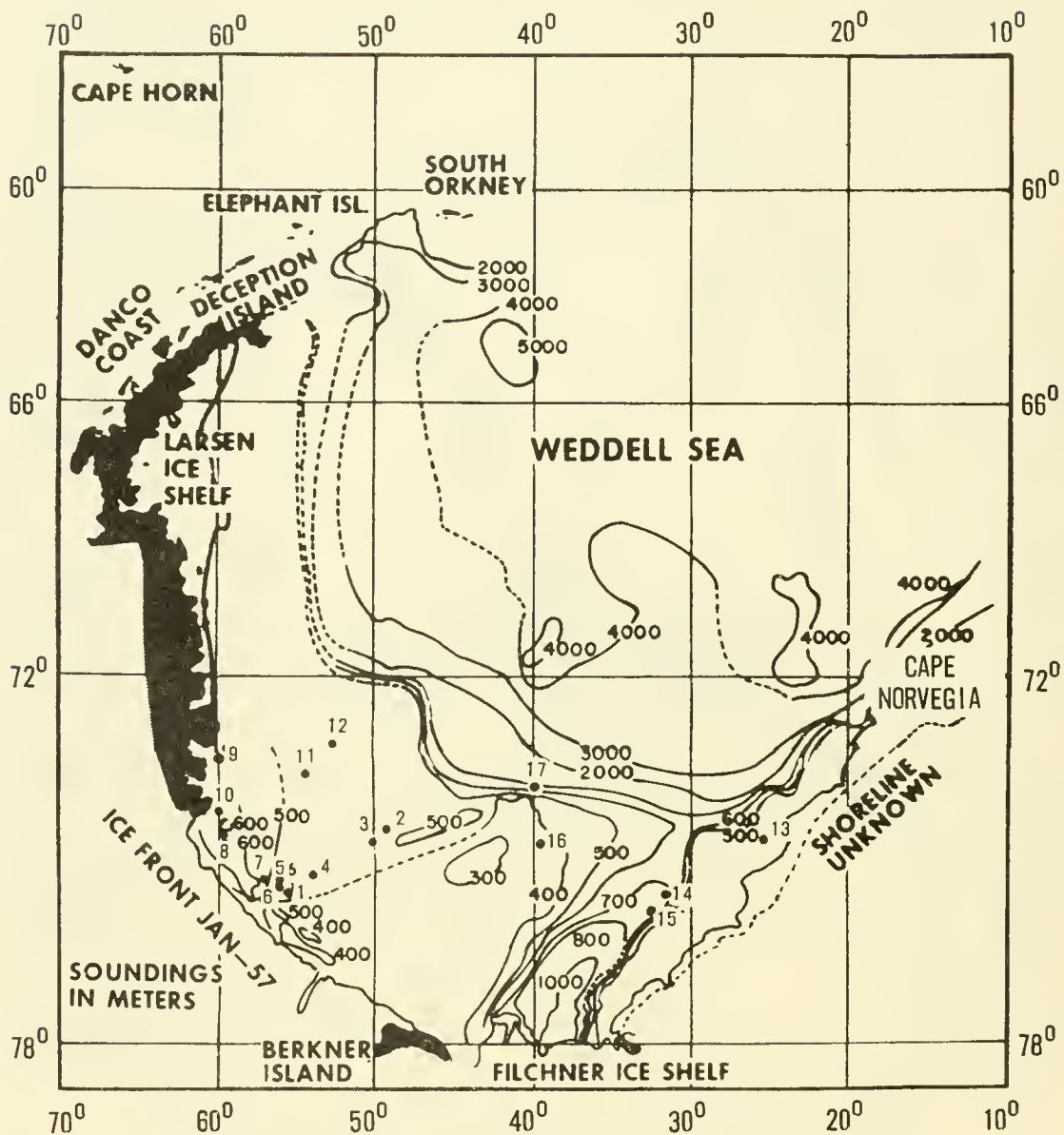


Figure 22. Weddell Sea bottom topography (prepared by Thor Kvinge).

APPENDIX A

OCEANOGRAPHIC DATA

A complete description of the codes utilized in the tabulation of oceanographic station data can be found in National Oceanographic Data Center publication M-2, *Processing Physical and Chemical Data from Oceanographic Stations*. (Rev. August 1964, supplement issued May 1966.)

To facilitate use of the oceanographic station data listing, entry headings which are not self-explanatory are described below.

Depth to Bottom	Corrected or uncorrected sounding in meters.
Max. Depth of Samples	Depth of deepest sample to nearest multiple of one hundred meters.
Wave observations	
DIR	Rounded to nearest multiple of ten degrees.
HGT	In increments of $\frac{1}{2}$ m. Sum of 5 meters plus increments of $\frac{1}{2}$ m if 50 is added to direction.
PER	If numerals 2 through 9 are entered, period in seconds is twice the numeric entry or 2X (numeric entry) + 1. For other entries see WMO Code 3155.
SEA	Sea state according to WMO Code 3700
Weather Code	If preceded by X, weather according to WMO Code 4501. If a two-digit entry, weather according to WMO Code 4677.
Cloud Code	
Type	Cloud type according to WMO Code 0500.
Amount	Cloud amount in eighths. Entry of the numeral 9 indicates cloud amount could not be estimated.
Water	
Color Code	Color according to Forel-Ule scale.
Trans	Transparency in whole meters as determined by Secchi disc.
Wind	
Dir	Rounded to nearest multiple of ten degrees.
Speed or Force	If preceded by letter S, wind speed in knots; if preceded by letter F, wind force according to Beaufort scale.
Barometer	Barometric pressure given in tens, units and tenths of millibars.
Air Temp. ° C.	Air temperature to tenths of a degree centigrade.
Vis. Code	Visibility according to WMO Code 4300.
No obs. depths	Number of observed levels associated with the station.
Messenger time	Entered in hours and tenths of an hour GMT. For Nansen casts, indicates time of release of messenger applicable to the observational level. For STD casts, indicates the starting time of lowering the sensor.
Card type	OBS designates observed levels. STD indicates the values at this standard level were interpolated by a modified 3-point LaGrange formula.
Depth (m)	Depth to nearest meter. A postscript T indicates depth was obtained thermometrically; 5 indicates uncorrected "wire out" depth. Postscript Q indicates value was marked doubtful by originator; P indicates value was considered doubtful by NODC. Postscripts P and Q retain this meaning throughout the following entries.
T °C.	Temperature to hundredths of a degree Centigrade.
S ‰	Salinity in parts-per-thousand.
SIGMA-T	Entered to hundredths.
Specific-volume	Multiply entry by 10^{-7} to obtain specific-volume anomaly in cubic centimeters per gram.
Anomaly— $\times 10^7$	
$\Sigma \Delta D$ Dyn. M. $\times 10^3$	Multiply entry by 10^{-3} to obtain anomaly of dynamic height in dynamic meters referenced to the sea surface.
Sound Velocity	Sound velocity according to Wilson's formula entered to tenths of a meter per second.
O ₂ ml/l	Dissolved oxygen in milliliters per liter entered to hundredths.
PO ₄ -p $\mu\text{g-at/l}$	Inorganic phosphate in microgram-atoms per liter entered to hundredths.
Total P $\mu\text{g-at/l}$	Total phosphorus in microgram-atoms per liter entered to hundredths.
NO ₂ -N $\mu\text{g-at/l}$	Nitrite-nitrogen in microgram-atoms per liter entered to hundredths.
NO ₃ -N $\mu\text{g-at/l}$	Nitrate-nitrogen in microgram-atoms per liter entered to tenths.
SiO ₄ -Si $\mu\text{g-at/l}$	Silicate-silicon in microgram-atoms per liter entered to whole units.
pH	Entered to hundredths.

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARS DEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER		
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR.	HGT	PER		SEA	TYPE		AMT	
31	8037	GL	740750	039365W	555	49	02	06	208	1968		001		0640	06	00	0	X		X1	6	6		0001
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS.		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS										
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB																	
					20	S04	746	-019	-033	7	12													
MESSAGE TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t ?	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	D ₂ ml/l	PD ₄ -P $\mu g - \text{ol/l}$	NH ₃ -N $\mu g - \text{ol/l}$	NO ₂ -N $\mu g - \text{ol/l}$	NO ₃ -N $\mu g - \text{ol/l}$	Si D ₄ -Si $\mu g - \text{ol/l}$	pH	3 C							
		STD	0000	-0139	3386	2727	0008147	0000	14413	864														
	208	OBS	0000	-0139	33864	2727			14413	864	156				224	044	825							
		STD	0010	-0153	3387	2728	0008034	0008	14408	850														
	208	OBS	0010	-0153	33873	2728			14408	850	159				199	045	826							
		STD	0020	-0148	3406	2743	0006606	0015	14414	827														
	208	OBS	0026	-0147	34152	2750			14417	815	176				245	053	825							
		STD	0030	-0150	3418	2753	0005675	0022	14417	810														
		STD	0050	-0162	3429	2762	0004787	0032	14416	782														
	208	OBS	0052	-0163	34295	2762			14416	779	188				237	065	826							
		STD	0075	-0169	3434	2766	000437	0043	14418	744														
	208	OBS	0077	-0170	34347	2767			14418	742	233				255	070	817							
		STD	0100	-0177	3435	2767	0004257	0054	14418	728														
	208	OBS	0103	-0176	34352	2767			14418	726	210				330	068	822							
		STD	0125	-0179	3436	2768	000416	0065	14422	720														
		STD	0150	-0180	3437	2769	0004066	0075	14425	712														
	208	OBS	T0155	-0180	34372	2769			14426	710	234				304	070	830							
		STD	0200	-0179	3439	2770	0003885	0095	14434	688														
	208	OBS	0207	-0178	34395	2771			14436	685	215				225	075	825							
		STD	0250	-0166	3441	2772	0003744	0114	14449	672														
		STD	0300	-0151	3444	2774	000354*	0132	14465	652														
	208	OBS	0312	-0147	34445	2774			14469	646	246				339	071	825							
		STD	0400	-0112	3451	2778	0003123	0166	14501	587														
	208	OBS	0416	-0107	34515	2778			14506	582	238				327	083	824							
		STD	0500	-0105	3457	2783	0002664	0194	14522	595														
	208	OBS	T0520	-00840	34573	27820				598	231				315	090	819							
		STD	0600	-0103	3457	2783	0002642	0221	14539	579														
	208	OBS	T0627	-0102	34561	2782			14544	566	249				311	094	830							

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUTY POSITION	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER			
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT				
31	8037	GL	74559S	048425W	556	48	02	08	000	1968		002	0544	05	00	0	X		X1	0	3		0002			
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB														
						DT	SD	19	S08	959	-019	-022	7	16												
MESSAGE TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t ?	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	D ₂ ml/l	PD ₄ -P $\mu g - \text{ol/l}$	NH ₃ -N $\mu g - \text{ol/l}$	NO ₂ -N $\mu g - \text{ol/l}$	NO ₃ -N $\mu g - \text{ol/l}$	Si D ₄ -Si $\mu g - \text{ol/l}$	pH	3 C									
		STD	0000	-0173	3393	2733	0007568	0000	14397																	
	015	OBS	0000	-0173	33928	2733			14397																	
		STD	0010	-0159	3420	2754	0005523	0007	14410																	
		OBS	0010	-0159	34198	2754			14410																	
		OBS	0016	-0159	34238	2757			14411																	
		STD	0020	-0166	3437	2766	0004194	0011	14410																	
		OBS	0020	-0166	34368	2768			14410																	
		STD	0030	-0170	3441	2772	0003871	0015	14411																	
		OBS	0030	-0170	34408	2772			14411																	
		STD	0050	-0165	3446	2776	0003452	0023	14417																	
		OBS	0050	-0165	34463	2776			14417																	
		STD	0075	-0166	3452	2780	0003014	0031	14422																	
		OBS	0075	-0166	34518	2780			14422																	
		STD	0100	-0172	3452	2781	0002945	0038	14423																	
		OBS	0100	-0172	34523	2781			14423																	
		STD	0125	-0165	3454	2782	0002836	0046	14431																	
		OBS	0125	-0165	34538	2782			14431																	
		STD	0150	-0172	3455	2783	0002687	0052	14432																	
		OBS	0150	-0172	34553	2783			14432																	
		STD	0200	-0174	3457	2785	0002539	0065	14439																	
		OBS	0200	-0174	34568	2785			14439																	
		STD	0250	-0175	3458	2786	0002393	0078	14447																	
		OBS	0250	-0175	34583	2786			14447																	
		STD	0300	-0178	3460	2788	0002203	0089	14454																	
		OBS	0300	-0178	34603	2788			14454																	
		STD	0400	-0183	3462	2789	0001978	0110	14469																	
		OBS	0400	-0183	34623	2789			14469																	
		STD	0500	-0182	3468	2794	0001507	0128	14487																	
		OBS	0500	-0182	34678	2794			14487																	
		OBS	0544	-0183	34683	2794			14494																	

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARSOEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER	
CTRY CODE	IO. NO.					10"	1"	MO	DAY		HR	1/10			CRUISE NO.	STATION NUMBER	DIR		HGT	PER		SEA
31B037	GL		74559S	048405W		556	48	02	08	044	1968	002	0560	05	00	0	X		X1	7 7		0003
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB										
									20	509	967	-036	-039	7	12							
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ σ OTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S CODE					
		STD	0000	-0169	3397	2736	0007255	0000	14400	786												
	044	OBS	0000	-0169	33970	2736			14400	786	191	216	013	289	066	816						
		STD	0010	-0170	3397	2736	0007246	0007	14401	797												
	044	OBS	0010	-0170	33970	2736			14401	797	191	117	020	303	065	816						
		STD	0020	-0166	3422	2756	000533	0014	14408	786												
	044	OBS	0027	-0165	34349	2767			14412	776	215	142	012	248	067	816						
		STD	0030	-0166	3436	2768	0004251	0018	14412	769												
		STD	0050	-0169	3442	2773	0003770	0026	14414	733												
	044	OBS	0054	-0170	34431	2773			14415	728	227	266	015	290	072	814						
		STD	0075	-0159	3449	2778	0003248	0035	14424	712												
	044	OBS	0080	-0158	34499	2779			14426	708	225	642	008	297	075	814						
		STD	0100	-0166	3452	2781	0002985	0043	14426	690												
	044	OBS	0107	-0168	34529	2781			14426	685	225	131	041	279	076	810						
		STD	0125	-0168	3454	2782	0002812	0050	14429	680												
		STD	0150	-0168	3455	2783	0002722	0057	14433	673												
	044	OBS	T0159	-0168	34556	2784			14435	671	236	123	007	288	077	807						
		STD	0200	-0172	3457	2785	000253	0070	14440	661												
	044	OBS	0211	-0173	34578	2785			14442	660	233	136	012	245	077	809						
		STD	0250	-0176	3459	2786	0002337	0082	14447	669												
		STD	0300	-0179	3460	2787	0002223	0094	14454	678												
	044	OBS	0314	-0180	34605	2788			14456	680	228	203	013	304	076	809						
		STD	0400	-0183	3463	2790	0001926	0115	14469	686												
	044	OBS	0415	-0183	34632	2790			14472	687	231	154	024	286	074	808						
	044	OBS	0465	-0182	34650	2792			14481	687	226	494	010	295	076	808						
		STD	0500	-0183	3467	2793	0001564	0132	14486	680												
	044	OBS	T0515	-0184	34679	2794			14489	676	227	212	010	311	082	801						

REFERENCE CTRY CODE	10. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARSOEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER			
						10"	1"	MO	DAY		HR./1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA		TYPE	AMT	
						10"	1"	MO	DAY		HR./1/10													
31B037		GL	7500 S	05021 W		557	50	02	08	160	1968	003		0503	05	00	0	X		X1	0 3		0004	
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO- METER (mb)	DRY BULB				WET BULB	VIS. CODE								
						OT	SD	13	511	014	-007				-020	7	16							
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°		Σ Δ σ OTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH							
187		STD	0000	-0162	3400	2738	0007057		0000	14404														
		OBS	0000	-0162	33998	2738				14404														
		STD	0010	-0163	3438	2769	000413		0006	14410														
		OBS	0010	-0163	34378	2769				14410														
		STD	0020	-0173	3445	2775	0003524		0009	14408														
		OBS	0020	-0173	34453	2775				14408														
		STD	0030	-0178	3448	2778	0003275		0013	14408														
		OBS	0030	-0178	34483	2778				14408														
		OBS	0032	-0172	34488	2778				14411														
		STD	0050	-0174	3451	2780	0003044		0019	14414														
		OBS	0050	-0174	34513	2780				14414														
		STD	0075	-0174	3453	2782	0002876		0027	14418														
		OBS	0075	-0174	34533	2782				14418														
		STD	0100	-0174	3455	2783	0002747		0034	14422														
		OBS	0100	-0174	34548	2783				14422														
		STD	0125	-0179	3456	2784	0002643		0040	14424														
		OBS	0125	-0179	34558	2784				14424														
		STD	0150	-0181	3457	2785	0002546		0047	14428														
		OBS	0150	-0181	34568	2785				14428														
		OBS	0184	-0185	34578	2786				14431														
		STD	0200	-0183	3458	2786	0002397		0059	14435														
		OBS	0200	-0183	34583	2786				14435														
		STD	0250	-0187	3460	2787	000224*		0071	14442														
		OBS	0250	-0187	34598	2787				14442														
		STD	0300	-0185	3462	2789	0002066		0082	14451														
		OBS	0300	-0185	34618	2789				14451														
		STD	0400	-0186	3465	2791	0001777		0101	14468														
		OBS	0400	-0186	34648	2791				14468														
		OBS	0458	-0186	34658	2792				14478														

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	JOINT INDIC	MARSDEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CITY CODE	IO. NO.						10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR.	HGT	PER		SEA	TYPE		AMT
31B	037	GL	753205	054260W	557	54	02	07	030	1968		004		0476	04	00	0	X		X1	0	3		0005
						WATER		WIND		BARO- METER (mb)		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS								
						COLOR	TRANS. (m)	DIR.	SPEED OR FORCE			DRY BULB	WET BULB											
						DT	SD	SD	20	506	005	-056	-065	7	20									

MESSAGE TIME HR 1/10		CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - \text{dl/l}$	NH ₃ -N $\mu g - \text{dl/l}$	NO ₂ -N $\mu g - \text{dl/l}$	NO ₃ -N $\mu g - \text{dl/l}$	SiO ₄ -Si $\mu g - \text{dl/l}$	pH	UNIT
			STD	0000	-0153	3386	2727	0008155	0000	14406								
	022		OBS	0000	-0153	33858	2727			14406								
			OBS	0007	-0138	34298	2762			14420								
			STD	0010	-0161	3434	2766	0004443	0006	14411								
	001		OBS	0010	-0161	34338	2766			14411								
			OBS	0016	-0169	34368	2768			14408								
			STD	0020	-0172	3439	2770	0004026	0011	14408								
			OBS	0020	-0172	34388	2770			14408								
			STD	0030	-0180	3441	2772	0003846	0014	14406								
			OBS	0030	-0180	34408	2772			14406								
			OBS	0032	-0181	34408	2772			14406								
			OBS	0040	-0182	34418	2773			14407								
			STD	0050	-0181	3442	2773	0003747	0022	14409								
			OBS	0050	-0181	34419	2773			14409								
			STD	0075	-0179	3444	2774	0003576	0031	14414								
			OBS	0075	-0179	34440	2774			14414								
			OBS	0080	-0179	34440	2774			14415								
			STD	0100	-0178	3446	2776	0003426	0040	14419								
			OBS	0100	-0178	34458	2776			14419								
			STD	0125	-0175	3447	2777	0003343	0048	14425								
			OBS	0125	-0175	34468	2777			14425								
			STD	0150	-0174	3450	2779	0003095	0056	14430								
			OBS	0150	-0174	34499	2779			14430								
			STD	0200	-0175	3454	2782	0002773	0071	14438								
			OBS	0200	-0175	34537	2782			14438								
			STD	0250	-0178	3456	2784	0002567	0084	14446								
			OBS	0250	-0178	34559	2784			14446								
			STD	0300	-0188	3460	2787	0002209	0096	14450								
			OBS	0300	-0188	34598	2787			14450								
			OBS	0320	-0191	34608	2788			14452								
			OBS	0360	-0189	34618	2789			14459								
			OBS	0392	-0191	34628	2790			14464								

REFERENCE		SHIP CODE	SNIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	JOINT INDIC	MARSDEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CITY CODE	IO. NO.							MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA	TYPE		AMT			
318037	GL			760025	056459W		557	66	02	09	150	1968		005		0450	04	00	10	X		X1	013		0006
		WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS														
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																	
		DT	SD	22	513	017	-104	-110	7	14															

MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - \text{dl/l}$	NH ₃ -N $\mu g - \text{dl/l}$	NO ₂ -N $\mu g - \text{dl/l}$	NO ₃ -N $\mu g - \text{dl/l}$	SiO ₄ -Si $\mu g - \text{dl/l}$	pH	UNIT
147		STD	0000	-0152													
		OBS	0000	-0152													
		STD	0010	-0183	3431	2764	0004619		14400								
		OBS	0010	-0183	34308	2764			14400								
		STD	0020	-0185	3436	2768	0004186		14401								
		OBS	0020	-0185	34363	2768			14401								
		STD	0030	-0186	3438	2770	0004024		14403								
		OBS	0030	-0186	34383	2770			14403								
		STD	0050	-0185	3440	2772	000386		14407								
		OBS	0050	-0185	34403	2772			14407								
		STD	0075	-0183	3443	2774	0003658		14412								
		OBS	0075	-0183	34428	2774			14412								
		STD	0100	-0183	3444	2774	0003566		14417								
		OBS	0100	-0183	34438	2774			14417								
		STD	0125	-0185	3444	2775	0003507		14420								
		OBS	0125	-0185	34443	2775			14420								
		STD	0150	-0184	3446	2776	0003342		14425								
		OBS	0150	-0184	34463	2776			14425								
		STD	0200	-0176	3453	2782	000280		14438								
		OBS	0200	-0176	34533	2782			14438								
	STD	0250	-0173	3456	2784	0002553		14448									
	OBS	0250	-0173	34563	2784			14448									
	STD	0300	-0172	3460	2787	0002223		14457									
	OBS	0300	-0172	34603	2787			14457									
	STD	0400	-0183	3465	2791	0001787		14469									
	OBS	0400	-0183	34648	2791			14469									
	OBS	0418	-0186	34678	2794			14471									

REFERENCE		SHIP		LATITUDE		LONGITUDE		DRAFT METER	MARSden SQUARE		STATION TIME IGMT		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE		CLOUD CODES		STATION NUMBER	NODC STATION NUMBER
CTRY CODE	ID. NO.	CODE	1/10	1/10	10"	1"	MD		DAY	HR.1/10	CRUISE NO.	STATION NUMBER		DIR.	HGT			PER	SEA	TYPE	AMT					
31	B037	GL	75533S	057234W	557	57	02	10	030	1968		706		0360	03	00	0	X		X1	0	3			0008	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
						COLOR CODE		TRANS. DIR.		SPEED OR FORCE		DRY BULB WET BULB														
						DT		SD		18		015		-108		-110		7		14						
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ _t ?		S Δ D DIN. M. x 10 ³		SDNO VELOCITY	D ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH							
		STD	0000	-0184	3384	2726		0008236		0000		14391														
	023	OBS	0000	-0184	33838	2726						14391														
		STD	0010	-0171	3425	2759		0005109		0007		14405														
		OBS	0010	-0171	34248	2759						14405														
	003	OBS	0012	-0146	34248	2758						14417														
		STD	0020	-0159	3428	2761		0004904		0012		14412														
		OBS	0020	-0159	34278	2761						14412														
		STD	0030	-0174	3434	2766		0004398		0016		14408														
		OBS	0030	-0174	34338	2766						14408														
		STD	0050	-0180	3439	2770		0003988		0025		14409														
		OBS	0050	-0180	34388	2770						14409														
		STD	0075	-0181	3442	2773		0003748		0034		14413														
		OBS	0075	-0181	34417	2773						14413														
		STD	0100	-0183	3446	2776		0003413		0043		14417														
		OBS	0100	-0183	34458	2776						14417														
		STD	0125	-0188	3447	2777		0003308		0052		14419														
		OBS	0125	-0188	34468	2777						14419														
		STD	0150	-0199	3450	2780		0002995		0060		14418														
		OBS	0150	-0199	34503	2780						14418														
		STD	0200	-0212	3457	2786		0002432		0073		14421														
		OBS	0200	-0212	34568	2786						14421														
		STD	0250	-0213	3458	2786		0002312		0085		14429														
		OBS	0250	-0213	34579	2786						14429														
		STD	0300	3459																						
		OBS	0300	34588																						
		OBS	0340	34597																						

REFERENCE CTRY CODE	ID. NO.	SHIP CODE	LATITUDE ° ' 10	LONGITUDE ° ' 10	MARS SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
						10"	1"	MO DAY HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
31B037	GL	75533S	057239W	557	57	02	10	030	1968	006		0360	03	00	0	X		X1	7	6	0009
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
						COLOR CODE	TRANSL UNIT	DIR.	SPEED OR FORCE	DRY BULB	WET BULB										
									18	S10	015	-108	-110	7	10						
MESSNGR TIME NR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S %.	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	Si O ₄ -Si μg - at/l	pH				
		STD	0000	-0174	3383	2725	0008296		0000	14396	957										
	037	OBS	0000	-0174	33833	2725				14396	957	111			108	053	837				
		STD	0010	-0175	3383	2725	0008295		0008	14397	993										
	037	OBS	0010	-0175	33832	2725				14397	993	111			107	053	839				
		STD	0020	-0170	3384	2725	0008238		0017	14401	986										
	037	OBS	0025	-0168	33871	2728				14403	982	123			115	053	839				
		STD	0030	-0168	3401	2739	0006931		0024	14406	923										
		STD	0050	-0170	3437	2768	0004182		0035	14413	766										
	037	OBS	0050	-0170	34366	2768				14413	766	215			265	068	813				
	037	OBS	0074	-0181	34423	2773				14413	747	227			285	070	811				
		STD	0075	-0181	3443	2774	0003648		0045	14413	745										
	037	OBS	0099	-0184	34467	2777				14416	714	215			290	071	811				
		STD	0100	-0184	3447	2777	0003318		0054	14416	714										
		STD	0125	-0188	3449	2779	0003139		0062	14419	715										
	037	OBS	0149	-0190	34512	2781				14422	715	236			291	071	809				
		STD	0150	-0190	3451	2781	0002943		0069	14423	715										
	037	OBS	0198	-0191	34558	2784				14431	724	224			295	067	811				
		STD	0200	-0192	3456	2784	0002547		0083	14431	724										
		STD	0250	-0209	3458	2786	0002315		0095	14431	713										
	037	OBS	T0295	-0214	34615	2789				14437	703	230			306	069	810				
		STD	0300	-0214	3462	2790	0001963		0106	14438	704										
	037	OBS	T0319	-0213	34637	2791				14442	712	231			301	071	808				

REFERENCE		SHIP CODE	LATITUDE ° ' 10	LONGITUDE ° ' 10	MARS SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO		DAY	HR.1/10			CRUISE NO.	STATION NUMBER	DIR	HGT		PER	SEA		TYPE
31B037	GL		75445S	057479W	557	57	02	10	060	1968	007	0433	04	00	0	X		X1	0	3		0010
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB											
						DT	SO	15	S15	015	-103	-109	7	14								
MESSNGR TIME NR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY- σ_{θ}		$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{at/l}$	NH ₃ -N $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C C			
		STO	0000	-0172	3386	2727		0008070		0000	14397											
	061	OBS	0000	-0172	33863	2727					14397											
		STO	0010	-0172	3387	2728		0008025		0008	14399											
		OBS	0010	-0172	33868	2728					14399											
	002	OBS	0016	-0146	34138	2749					14416											
		STO	0020	-0161	3428	2761		0004898		0015	14411											
		OBS	0020	-0161	34278	2761					14411											
		STO	0030	-0168	3438	2769		0004068		0019	14411											
		OBS	0030	-0168	34383	2769					14411											
		STO	0050	-0178	3443	2774		0003647		0027	14411											
		OBS	0050	-0178	34433	2774					14411											
		STO	0075	-0183	3449	2779		0003159		0035	14413											
		OBS	0075	-0183	34493	2779					14413											
		STO	0100	-0184	3450	2780		0003065		0043	14417											
		OBS	0100	-0184	34503	2780					14417											
		STO	0125	-0188	3453	2782		0002848		0050	14420											
		OBS	0125	-0188	34528	2782					14420											
		STO	0150	-0188	3454	2783		0002756		0057	14424											
		OBS	0150	-0188	34538	2783					14424											
		STO	0200	-0192	3455	2783		0002639		0071	14430											
		OBS	0200	-0192	34548	2783					14430											
		STO	0250	-0194	3456	2785		0002488		0084	14438											
		OBS	0250	-0194	34563	2785					14438											
		STO	0300	-0200	3458	2786		0002286		0096	14444											
		OBS	0300	-0200	34583	2786					14444											
		OBS	0388	-0198	34613	2789					14460											

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPT INDEX	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10'	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
31B	037	GL	75445S	057479W	557	57	02	10	060	1968		007	0400	04	00	0	X		X1	6	7	0011	
		WATER		WIND		BARO- METER (mba)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTNS	SPECIAL OBSERVATIONS												
		COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB															
				15	515		015	-103															-109
MESSAGE TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t ?	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	3 C C						
		STD	0000	-0166	3394	2733	0007531	0000	14401	976													
	073	OBS	0000	-0166	33935	2733			14401	976	104	258	016	088	054	841							
		STD	0010	-0165	3394	2733	0007520	0008	14403	980													
	073	OBS	0010	-0165	33936	2733			14403	980	109	374	015	081	051	843							
		STD	0020	-0165	3394	2733	0007506	0015	14405	977													
	073	OBS	0026	-0165	33937	2733			14406	975	117	247	012	074	051	843							
		STD	0030	-0164	3400	2738	0007019	0022	14408	946													
		STD	0050	-0156	3426	2759	0005034	0034	14419	834													
	073	OBS	0052	-0155	34280	2761			14420	825	189	382	011	223	070	823							
		STD	0075	-0166	3438	2769	0004071	0046	14420	766													
	073	OBS	0078	-0167	34389	2770			14420	760	211	412	008	258	069	820							
		STD	0100	-0178	3448	2778	0003258	0055	14419	728													
	073	OBS	0104	-0179	34489	2778			14420	723	220	240	012	292	073	811							
		STD	0125	-0182	3452	2781	0002926	0063	14422	706													
		STD	0150	-0184	3455	2783	0002676	0070	14426	694													
	073	OBS	0156	-0185	34560	2784			14427	692	227	274	010	324	077	810							
		STD	0200	-0189	3458	2786	0002402	0082	14432	698													
	073	OBS	0207	-0190	34586	2787			14433	699	222	182	010	300	075	810							
		STD	0250	-0193	3460	2788	0002207	0094	14439	699													
		STD	0300	-0197	3462	2789	0002043	0104	14446	699													
	073	OBS	0310	-0198	34619	2789			14447	699	225	145	006	306	073	809							
	073	OBS	0354	-0197	34625	2790			14455	701	219	352	010	303	078	807							
	073	OBS	0394	-0199	34636	2791			14461	695	234	367	025	330	074	806							

REFERENCE		SHIP CODE	LATITUDE " 1/10	LONGITUDE " 1/10	DEPT INDEX	MARS SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLES	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10'	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
						WATER	WIND		BARO- METER (mba)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS			SPECIAL OBSERVATIONS							
		COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	DRY BULB	WET BULB																
		DT	SD	19	S29	074	-085	-088	7	14													
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t ?	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S C C						
		STD	0000	-0193	3400	2739	0006986	0000	14389														
	089	OBS	0000	-0193	33998	2739			14389														
		STD	0010	-0190	3425	2759	0005026	0006	14396														
		OBS	0010	-0190	34253	2759			14396														
		STD	0020	-0191	3429	2762	0004748	0011	14397														
		OBS	0020	-0191	34288	2762			14397														
		STD	0030	-0191	3433	2766	0004434	0015	14400														
		OBS	0030	-0191	34328	2766			14400														
		STD	0050	-0190	3437	2769	0004078	0024	14404														
		OBS	0050	-0190	34373	2769			14404														
		STD	0075	-0190	3441	2772	0003756	0034	14409														
		OBS	0075	-0190	34413	2772			14409														
		STD	0100	-0190	3444	2775	000351	0043	14413														
		OBS	0100	-0190	34443	2775			14413														
		STD	0125	-0190	3446	2777	000334*	0051	14418														
		OBS	0125	-0190	34463	2777			14418														
		STD	0150	-0190	3450	2780	0003019	0059	14422														
		OBS	0150	-0190	34503	2780			14422														
		STD	0200	-0190	3455	2784	0002606	0073	14431														
		OBS	0200	-0190	34553	2784			14431														
		STD	0250	-0192	3467	2793	0001691	0084	14440														
		OBS	0250	-0192	34668	2793			14440														
		STD	0300	-0193	3472	2798	0001238	0092	14449														
		OBS	0300	-0193	34723	2798			14449														
		STD	0400	-0193	3479	2803	0000685	0101	14467														
		OBS	0400	-0193	34788	2803			14467														
		OBS	0456	-0192	34803	2804			14477														

[illegible]

REFERENCE		SNIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NDOC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR.	HGT	PER		SEA	TYPE		AMT
31B	037	GL	74010S	054455W	557	44	02	12	120	1968		011		0459	04	00	0	X		X1	6	7	0015
		WATER COLOR CODE	TRANS. IN	WIND DIR.	SPEED OR FORCE	BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS												
							DRY RULR	WET RULR															
						00	500	022	-040	-043	7	11											
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°		Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	D ₂ ml/l	PO ₄ -P μg - ml/l	NH ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S °C					
		STD	0000	-0178	3428	2761	0004860		0000	14400	722												
	129	OBS	0000	-0178	34279	2761				14400	722	222				287	070	811					
		STD	0010	-0178	3427	2761	0004900		0005	14402	734												
	129	OBS	0010	-0178	34273	2761				14402	734	228	312	011	284	070	804						
		STD	0020	-0168	3443	2773	0003713		0009	14410	733												
	129	OBS	0026	-0163	34500	2779				14415	732	242	175	005	312	072	807						
		STD	0030	-0161	3451	2780	0003114		0013	14417	714												
		STD	0050	-0148	3457	2784	000268		0018	14427	657												
	129	OBS	0052	-0147	34573	2784				14427	654	243	140	005	323	080	807						
		STD	0075	-0173	3461	2788	0002289		0025	14420	666												
	129	OBS	0078	-0175	34616	2789				14419	669	246	556	005	313	078	804						
		STD	0100	-0182	3465	2792	0001944		0030	14420	704												
	129	OBS	0104	-0183	34651	2792				14420	708	237	391	009	309	070	808						
		STD	0125	-0185	3466	2792	0001844		0035	14423	699												
		STD	0150	-0188	3466	2792	0001821		0039	14425	693												
	129	OBS	0156	-0189	34666	2793				14426	692	245	242		359	072	807						
		STD	0200	-0188	3467	2793	0001716		0048	14434	695												
	129	OBS	0208	-0188	34675	2794				14435	695	243	102	017	321	071	802						
		STD	0250	-0188	3468	2794	0001618		0056	14442	694												
		STD	0300	-0189	3468	2794	0001557		0064	14450	693												
	129	OBS	0312	-0189	34684	2794				14452	693	237	149		336	072	808						
		STD	0400	-0194	3475	2800	000097*		0077	14466	713												
	129	OBS	0416	-0195	34770	2802				14468	717	236		000	288	070	811						
	129	OBS	T0432	-0194	34786	2803				14471	709	235	195	009	280	065	807						

REFERENCE		SNIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DIFF INCH	MARS SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		WDC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DR.			HGT	PER	SEA	TYPE		AMT			
31B	037	GL	74010S	054455W		557	44	02	12	150	1968		011		0459	04	00	0	X		X1	0	3		0016
		WATER COLOR CODE	WIND TRANS. UNITS	WIND DIR.	WIND SPEED OR FORCE	BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS														
							DRY RULR	WET RULR																	
							DT	SO					09	509	019	-003	-038	7	16						
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°		Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	NH ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH								
			STD	0000	-0182	3425	2759	0005050	0000	14398															
147			OBS	0000	-0182	34253	2759			14398															
			STD	0010	-0182	3435	2767	0004284	0005	14401															
			OBS	0010	-0182	34352	2767			14401															
			STD	0020	-0151	3449	2777	0003338	0008	14419															
			OBS	0020	-0151	34485	2777			14419															
			STD	0030	-0140	3455	2782	0002906	0012	14427															
			OBS	0030	-0140	34545	2782			14427															
			STD	0050	-0169	3459	2786	0002459	0017	14417															
			OBS	0050	-0169	34591	2786			14417															
			STD	0075	-0183	3462	2789	0002201	0023	14415															
			OBS	0075	-0183	34618	2789			14415															
			STD	0100	-0188	3463	2790	0002058	0028	14417															
			OBS	0100	-0188	34633	2790			14417															
			STD	0125	-0189	3464	2791	0002002	0033	14421															
			OBS	0125	-0189	34638	2791			14421															
			STD	0150	-0189	3465	2792	0001911	0038	14425															
			OBS	0150	-0189	34648	2792			14425															
			STD	0200	-0189	3465	2792	0001844	0047	14433															
			OBS	0200	-0189	34653	2792			14433															
			STD	0250	-0189	3466	2792	0001776	0057	14442															
			OBS	0250	-0189	34658	2792			14442															
			STD	0300	-0190	3467	2793	0001668	0065	14450															
			OBS	0300	-0190	34668	2793			14450															
			OBS	0328	-0191	34683	2794			14454															
			OBS	0332	-0198	34688	2795			14452															
			STD	0400	-0195	3477	2802	0000793	0077	14465															
			OBS	0400	-0195	34773	2802			14465															
			OBS	0418	-0195	34773	2802			14468															

REFERENCE CTRY CODE	SHIP IO. NO.	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INDEX	MARSOEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	

MESSAGE TIME NR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-2107	Σ Δ σ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S C
		STD	0000	-0183	3425	2759	0005087	0000	14397								
021		OBS	0000	-0183	34248	2759			14397								
		STD	0010	-0178	3430	2763	0004708	0005	14402								
002		OBS	0010	-0178	34298	2763			14402								
		OBS	0016	-0170	34363	2768			14408								
		STD	0020	-0172	3438	2770	0004064	0009	14408								
		OBS	0020	-0172	34383	2770			14408								
		STD	0030	-0172	3442	2773	0003751	0013	14410								
		OBS	0030	-0172	34423	2773			14410								
		STD	0050	-0175	3447	2777	0003348	0020	14413								
		OBS	0050	-0175	34473	2777			14413								
		OBS	0056	-0171	34485	2778			14416								
		OBS	0064	-0173	34496	2779			14416								
		STD	0075	-0162	3451	2779	0003102	0028	14423								
		OBS	0075	-0162	34508	2779			14423								
		OBS	0096	-0147	34530	2781			14434								
		STD	0100	-0159	3454	2782	0002875	0036	14429								
		OBS	0100	-0159	34537	2782			14429								
		STD	0125	-0140	3455	2782	0002824	0043	14443								
		OBS	0125	-0140	34550	2782			14443								
		OBS	0137	-0133	34558	2783			14448								
		STD	0150	-0159	3457	2784	0002597	0050	14438								
		OBS	0150	-0159	34570	2784			14438								
		OBS	0163	-0157	34576	2785			14441								
		STD	0200	-0183	3463	2790	0002053	0061	14436								
		OBS	0200	-0183	34628	2790			14436								
		STD	0250	-0187	3467	2793	0001714	0071	14443								
		OBS	0250	-0187	34667	2793			14443								
		STD	0300	-0188	3468	2794	0001575	0079	14451								
		OBS	0300	-0188	34681	2794			14451								
		STD	0400	-0191	3473	2798	0001157	0093	14467								
		OBS	0400	-0191	34727	2798			14467								

REFERENCE CTRY CODE	SHIP IO. NO.	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INDEX	MARSOEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	

MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-2107	Σ Δ σ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S C
141		STD	0000	-0099	3375	2716	0009158	0000	14430								
		OBS	0000	-0099	33748	2716			14430								
		STD	0010	-0086	3378	2718	0008930	0009	14438								
		OBS	0010	-0086	33783	2718			14438								
		STD	0020	-0061	3383	2721	0008675	0018	14452								
		OBS	0020	-0061	33828	2721			14452								
		OBS	0025	-0050	33943	2730			14459								
		STD	0030	-0056	3401	2735	0007315	0026	14458								
		OBS	0030	-0056	34008	2735			14458								
		OBS	0032	-0061	34040	2738			14457								
		OBS	0040	-0062	34083	2742			14458								
		OBS	0048	-0060	34114	2744			14461								
		STD	0050	-0071	3412	2745	0006362	0040	14456								
		OBS	0050	-0071	34124	2745			14456								
		STD	0075	-0186	3426	2760	0004955	0054	14408								
		OBS	0075	-0186	34258	2760			14408								
		STD	0100	-0188	3429	2763	0004665	0066	14412								
		OBS	0100	-0188	34293	2763			14412								
		STD	0125	-0188	3430	2763	0004573	0077	14416								
		OBS	0125	-0188	34303	2763			14416								
	STD	0150	-0189	3433	2766	0004355	0088	14420									
	OBS	0150	-0189	34329	2766			14420									
	STD	0200	-0189	3436	2768	0004094	0110	14429									
	OBS	0200	-0189	34359	2768			14429									
	STD	0250	-0189	3437	2769	0003955	0130	14438									
	OBS	0250	-0189	34373	2769			14438									
	STD	0300	-0190	3439	2770	0003814	0149	14446									
	OBS	0300	-0190	34387	2770			14446									
	STD	0400	-0192	3441	2773	0003547	0186	14462									
	OBS	0400	-0192	34413	2773			14462									
	OBS	0480	-0190	34418	2773			14476									

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	MARSOEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA	TYPE		AMT		
31B	037	GL	75267S	026326W	554	56	02	15	180	1968		013		0507	05	00	0	X		X1	6	17		0019
		WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS												
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE			DRY BULB	WET BULB	VIS CODE														
						04	S07	975	-050	-055	7	14												
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME AND MALT-310 ³	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S C							
		STD	0000	-0084	3381	2720	0008757	0000	14438	847														
186		OBS	0000	-0084	33807	2720			14438	847	131	521	012	149	065	833								
		STD	0010	-0085	3380	2720	0008788	0009	14439	838														
186		OBS	0010	-0085	33802	2720			14439	838	141	205	006	149	064	835								
		STD	0020	-0070	3383	2721	0008625	0017	14448	855														
186		OBS	0025	-0064	33855	2723			14452	861	158	128	006	150	064	827								
		STD	0030	-0061	3388	2725	0008274	0026	14454	860														
		STD	0050	-0049	3399	2734	0007477	0042	14465	855														
186		OBS	0051	-0048	33997	2734			14465	855	137	224	008	148	065	834								
		STD	0075	-0048	3416	2747	0006175	0059	14472	865														
186		OBS	0076	-0049	34161	2747			14471	865	155	239	005	154	063	835								
		STD	0100	-0122	3425	2757	000519	0073	14443	819														
186		OBS	0101	-0124	34252	2758			14442	817	175		007	223	069	823								
		STD	0125	-0164	3428	2761	0004838	0085	14427	783														
		STD	0150	-0190	3430	2763	0004559	0097	14420	758														
186		LIT	0152	-0191					757		236	574	005	293	070	Q								
		STD	0200	-0189	3435	2768	0004132	0119	14429	745														
186		OBS	0203	-0189	34357	2768			14430	744	215	093	009	298	072	818								
		STD	0250	-0188	3432	2764	0004401	0140	14437	744														
186		OBS	0253	-0188	34312	2764			14438	744	221	225	009	305	073	813								
		STD	0300	-0187	3439	2771	0003800	0161	14447	727														
186		OBS	0304	-0187	34396	2771			14448	726	210	026	025	317	072	814								
		STD	0400	-0194	3441	2772	0003565	0198	14461	734														
186		OBS	T0408	-0194	34413	2773			14462	735	220	255	005	309	071	813								
186		OBS	0457	-0194	34423	2773			14471	733	228	136	015	287	069	810								
186		OBS	T0478	-0194	34437	2775			14474	733	226	306	010	302	070	811								
186		OBS	T0499	-0193	34427	2774			14478	736	234	234	005	312	066	811								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	MARSOEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER						
CTRY CODE	ID. NO.						10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		TYPE	AMT				
31B	037	GL	76142S	033489W	555	63	02	16	150	1968		014		0768	02	00	0	X		X7	0	3		0020				
							WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
							COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE			DRY BULB	WET BULB														
							OT	SD	10	S11	793	-008	-014	7				13										
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME AND MALT-310 ³		Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S C										
159		STD	0000	-0019	3412	2743			0006603	0000	14472																	
		OBS	0000	-0019	34123	2743					14472																	
		STD	0010	-0022	3412	2743			0006587	0007	14472																	
		OBS	0010	-0022	34123	2743					14472																	
		STD	0020	-0030	3414	2745			0006435	0013	14471																	
		OBS	0020	-0030	34138	2745					14471																	
		STD	0030	-0097	3420	2752			0005713	0019	14442																	
		OBS	0030	-0097	34197	2752					14442																	
		OBS	0035	-0104	34223	2755					14440																	
		OBS	0040	-0113	34241	2756					14437																	
		STD	0050	-0134	3427	2759			0005053	0030	14429																	
		OBS	0050	-0134	34266	2759					14429																	
		OBS	0054	-0141	34288	2761					14427																	
		STD	0075	-0162	3433	2765			0004443	0042	14421																	
		OBS	0075	-0162	34333	2765					14421																	
		STD	0100	-0172	3437	2769			0004094	0052	14421																	
	OBS	0100	-0172	34373	2769					14421																		
	STD	0125	-0175	3438	2770			0003995	0063	14424																		
	OBS	0125	-0175	34383	2770					14424																		
	STD	0150	-0179	3440	2771			0003854	0072	14426																		
	OBS	0150	-0179	34398	2771					14426																		
	OBS	0194	-0179	34418	2773					14434																		

REFERENCE	SHIP	LATITUDE	LONGITUDE	DATE	MARS DEN	STATION TIME				YEAR	ORIGINATOR'S		DEPTH	MAX. DEPTH	WAVE				WEA-	CLOUD		NDDC
						10"	1"	MO	DAY	HR.1/10	CRUISE	STATION			DIR.	HGT	PER	SEA				
CTRY	ID.				SQ						NO.	NUMBER	TO	OF					CODE	TYPE	AMT	STATION
CODE	NO.												BOTTOM	SAMPLES								NUMBER

MESSNGR TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME AND MALT-210°	Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	D ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	Si O ₄ -Si μg - at/l	pH	S CTC
015		STD	0000	-0048	3399	2733	0007517	0000	14457								
		OBS	0000	-0048	33987	2733			14457								
		STD	0010	-0048	3399	2734	0007484	0008	14459								
002		OBS	0010	-0048	33991	2734			14459								
		OBS	0014	-0046	34038	2737			14461								
		STD	0020	-0091	3417	2750	0005945	0014	14443								
		OBS	0025	-0121	34253	2758			14431								
		STD	0030	-0145	3433	2765	0004539	0019	14421								
		OBS	0040	-0173	34418	2772			14411								
		STD	0050	-0174	3443	2773	0003719	0028	14412								
		OBS	0050	-0174	34425	2773			14412								
		STD	0075	-0175	3443	2774	0003641	0037	14416								
		OBS	0075	-0175	34433	2774			14416								
		STD	0100	-0175	3444	2775	0003542	0046	14420								
		OBS	0100	-0175	34444	2775			14420								
		STD	0125	-0173	3446	2776	0003410	0055	14426								
		STD	0150	-0172	3448	2777	0003284	0063	14431								
		OBS	0150	-0172	34475	2777			14431								
		STD	0200	-0172	3449	2778	0003134	0079	14439								
		OBS	0200	-0172	34491	2778			14439								
	STD	0250	-0174	3451	2780	0002954	0094	14447									
	STD	0300	-0177	3454	2782	0002710	0108	14454									
	OBS	0300	-0177	34537	2782			14454									
	STD	0400	-0183	3458	2786	0002290	0133	14468									
	OBS	0400	-0183	34582	2786			14468									
	STD	0500	-0195	3464	2791	0001785	0154	14480									
	OBS	0500	-0195	34635	2791			14480									
	OBS	0560	-0203	34644	2792			14487									
	OBS	0592	-0207	34652	2792			14490									

REFERENCE	SHIP	LATITUDE	LONGITUDE	DATE	MARS DEN	STATION TIME				YEAR	ORIGINATOR'S		DEPTH	MAX. DEPTH	WAVE				WEA-	CLOUD		NDDC
						10"	1"	MO	DAY	HR.1/10	CRUISE	STATION			DIR.	HGT	PER	SEA				
CTRY	ID.				SQ						NO.	NUMBER	TO	OF					CODE	TYPE	AMT	STATION
CODE	NO.												BOTTOM	SAMPLES								NUMBER

MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME AND MALT-210°	Σ Δ D DYH. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P	NH ₃ -N	NO ₂ -N	NO ₃ -N	Si O ₄ -Si	pH	S CTC
											μg - at/l	μg - at/l	μg - at/l	μg - at/l	μg - at/l		
		STD	0000	-0056	3402	2736	0007210	0000	14454	869							
028		OBS	0000	-0056	34023	2736			14454	869	111	168	013	164	040	832	
028		OBS	0007	-0057	34024	2737			14454	861	134	216	003	145	041	831	
		STD	0010	-0056	3407	2740	0006846	0007	14456	858							
028		OBS	0018	-0054	34186	2750			14460	841	147	170	008	144	044	829	
		STD	0020	-0062	3420	2751	0005826	0013	14457	830							
		STD	0030	-0098	3428	2759	0005074	0019	14443	784							
028		OBS	0037	-0121	34327	2764			14434	760	196	138	012	248	057	815	
		STD	0050	-0162	3440	2771	0003943	0028	14418	739							
028		OBS	0056	-0174	34417	2772			14413	732	220	017	015	194	065	814	
028		OBS	0073	-0183	34430	2774			14412	724	220	112	004	246	065	815	
		STD	0075	-0183	3443	2774	0003643	0037	14412	724							
		STD	0100	-0183	3443	2774	0003612	0046	14416	718							
028		OBS	0108	-0183	34432	2774			14418	716	229	473	009	255	067	810	
		STD	0125	-0181	3444	2774	0003541	0055	14422	726							
028		OBS	0141	-0179	34444	2775			14425	732	235	222	000	276	063	814	
		STD	0150	-0179	3445	2775	0003487	0064	14427	729							
		STD	0200	-0177	3446	2776	0003363	0081	14436	715							
028		OBS	0205	-0177	34460	2776			14437	713	212	130	003	260	065	810	
028		OBS	0225	-0193	34482	2778			14433	721	220	059	004	222	064	814	
		STD	0250	-0191	3449	2779	0003054	0097	14438	720							
		STD	0300	-0188	3451	2780	0002905	0112	14449	719							
028		OBS	0350	-0184	34524	2781			14459	718	216	094	000	236	064	812	
		STD	0400	-0192	3457	2785	000235	0138	14464	717							
028		OBS	T0425	-0195	34583	2786			14467	716	219	065	000	229	063	812	
028		OBS	T0477	-0199	34606	2788			14474	715	221	183	004	260	063	811	
		STD	0500	-0199	3462	2789	0001885	0160	14478	712							
028		OBS	T0518	-0199	34624	2790			14481	709	236	08	000	221	061	808	

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	ACTION NO.	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER
CTRY CODE	ID. NO.					10"	1'	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT	
318037		GL	74506S	039049W		555	49	02	17	180	1968		016	0384	04	00	0	X		X2	6	8	0023
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbars)		DRY BULB	WET BULB										
								09	S10	795		-003	-015	7	11								
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-2107	Σ Δ σ DTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S C						
		STD	0000	-0145	3377	2719	0008882	0000	14408	808													
177		OBS	0000	-0145	33766	2719			14408	808	154	248	016	184	043	826							
		STD	0010	-0147	3376	2718	0008948	0009	14409	828													
177		OBS	0010	-0147	33756	2718			14409	828	168	166	012	232	043	826							
		STD	0020	-0147	3377	2719	0008857	0018	14411	828													
177		OBS	0025	-0147	33772	2719			14412	828	176	070	012	163	043	824							
		STD	0030	-0150	3392	2731	0007669	0026	14413	815													
		STD	0050	-0161	3433	2765	0004483	0038	14417	769													
177		OBS	0051	-0162	34338	2766			14417	767	230	156	010	216	058	816							
		STD	0075	-0175	3440	2771	0003908	0049	14415	728													
177		OBS	0076	-0176	34400	2771			14415	727	250	068	007	192	069	813							
		STD	0100	-0181	3441	2772	0003803	0058	14417	721													
177		OBS	0102	-0181	34409	2772			14417	720	240	251	026	215	070	811							
		STD	0125	-0177	3442	2773	000372	0068	14423	718													
		STD	0150	-0173	3443	2773	0003640	0077	14429	715													
177		OBS	T0152	-0173	34429	2773			14430	715	263	109	003	278	071	814							
		STD	0200	-0168	3445	2775	0003461	0095	14441	702													
177		OBS	0204	-0167	34452	2775			14442	701	249	155	TRC	271	073	813							
		STD	0250	-0162	3447	2777	0003269	0112	14452	697													
		STD	0300	-0157	3450	2778	0003086	0127	14463	692													
177		OBS	0306	-0156	34500	2779			14464	691	238	059	TRC	220	074	815							
177		OBS	T0334	-0146	34554	2783			14474	671	261	109	005	259	077	812							
177		OBS	T0356	-0146	34564	2784			14478	674	251	095	004	218	077	812							

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH IN METERS	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER
CTRY CODE	ID. NO.					10"	1'	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT	
318037		GL	74024S	040372W		556	40	02	18	030	1968		017	0695	06	00	0	X		X7	7	8	0024
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbars)		DRY BULB	WET BULB										
								18	S12	814		-001	-011	6	13								
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-2107	Σ Δ σ DTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S C						
		STD	0000	-0150	3380	2722	0008577	0000	14407	844													
045		OBS	0000	-0150	33804	2722			14407	844	131			025	187	026	820						
		STD	0010	-0150	3380	2722	000857*	0009	14408	850													
045		OBS	0010	-0150	33804	2722			14408	850	129			020	142	030	818						
		STD	0020	-0155	3387	2728	0008045	0017	14408	850													
045		OBS	0024	-0156	33907	2731			14409	847	155			017	201	027	816						
		STD	0030	-0156	3400	2738	0007039	0024	14411	829													
045		OBS	0049	-0156	34226	2756			14418	781	191			013	133	050	806						
		STD	0050	-0157	3423	2757	0005261	0037	14418	779													
045		OBS	0073	-0167	34324	2765			14418	744	193			010	124	071	805						
		STD	0075	-0168	3433	2765	0004449	0049	14418	743													
045		OBS	0098	-0173	34367	2768			14420	735	200			023	198		806						
		STD	0100	-0173	3437	2769	0004114	0060	14420	734													
		STD	0125	-0175	3439	2770	0003942	0070	14424	723													
045		OBS	T0148	-0176	34400	2771			14427	714	188			010	165	080	805						
		STD	0150	-0176	3440	2771	0003840	0079	14428	713													
045		OBS	0197	-0170	34414	2772			14438	699	204			007		072	805						
		STD	0200	-0169	3442	2772	0003723	0098	14439	699													
		STD	0250	-0160	3443	2773	0003589	0117	14452	691													
045		OBS	0297	-0151	34449	2774			14464	681	210			005	218	070	804						
		STD	0300	-0150	3445	2774	0003468	0134	14465	681													
045		OBS	0397	-0121	34501	2778			14496	651	210			003		078	803						
		STD	0400	-0115	3451	2778	000311	0167	14499	645													
045		OBS	0496	-0015	34622	2783			14563	540	217			005	216	089	797						
		STD	0500	-0022	3462	2783	0002736	0196	14561	544													
045		OBS	0572	-0070	34616	2785			14550	576	211			006	253	095	801						
045		OBS	T0597	-0050	34627	2785			14564	572	223			004	083	800							

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REFERENCE		SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	HAUSEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAR. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CTRY CODE	IO. NO.					10°	1°	MO	DAY	HR./10	CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT	

MESSAGE TIME HR. /10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ ρ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	NH ₃ -N μg - dl/l	NO ₂ -N μg - dl/l	NO ₃ -N μg - dl/l	S O ₄ -S μg - dl/l	pH	S
		STD	0000	-0155	3361	2707	0010039	0000	14402	806							
	017	OBS	0000	-0155	33612	2707			14402	806	195	114	027	249	058		
		STD	0010	-0157	3361	2707	0010012	0010	14402	824							
	017	OBS	0010	-0157	33614	2707			14402	824	188	102	023	210	058		
		STD	0020	-0131	3396	2734	0007422	0019	14421	824							
	017	OBS	0024	-0126	34075	2743			14426	824	179	113	018	173	049		
		STD	0030	-0141	3419	2753	0005624	0025	14421	796							
	017	OBS	0049	-0173	34424	2773			14413	735	229	147	016	259	070		
		STD	0050	-0173	3442	2773	0003729	0035	14413	734							
	017	OBS	0073	-0176	34429	2773			14414	717	226	073	017	205	073		
		STD	0075	-0178	3443	2774	0003656	0044	14415	717							
	017	OBS	0098	-0180	34432	2774			14418	720	223	113	013	214	073		
		STD	0100	-0180	3443	2774	000362	0053	14418	720							
		STD	0125	-0180	3444	2774	0003582	0062	14422	714							
	017	OBS	0147	-0180	34438	2774			14426	709	235	124	009	284	072		
		STD	0150	-0180	3444	2774	0003530	0071	14426	708							
	017	OBS	T0197	-0177	34444	2775			14436	699	218	069	016	275	074		
		STD	0200	-0177	3445	2775	0003471	0088	14436	699							
		STD	0250	-0173	3445	2775	0003386	0105	14446	699							
	017	OBS	0297	-0169	34462	2776			14456	690	223	041	011	282	075		
		STD	0300	-0168	3446	2776	0003306	0122	14457	689							
	017	OBS	0398	-0133	34494	2777			14490	645	225	116	020	299	078		
		STD	0400	-0132	3450	2778	0003112	0154	14491	644							
		STD	0500	-0061	3457	2781	0002921	0184	14542	579							
	017	OBS	T0500	-0061	34566	2781			14542	579	233		015	299	089		
		STD	0600	0011	3463	2782	0002839	0213	14593	506							
	017	OBS	0600	0011	34633	2782			14593	506	241	057	008	293	098		
		STD	0700	0041	3467	2783	0002812	0242	14624	492							
	017	OBS	T0702	0042	34666	2783			14624	492	240	108	009	233	103		
		STD	0800	0046	3468	2784	0002776	0269	14642	486							
	017	OBS	T0807	0046	34676	2784			14644	486	254	028	009	272	107		

REFERENCE CTRY CODE	IO. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARS DEN	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- TNER CODE	CLOUD CODES		NODC STATION NUMBER			
						10"			MO	DAY			HR. 1/10	CRUISE NO.	STATION NUMBER	DIR		HGT	PER		SEA	TYPE	AMT
						°	1"		MO	DAY			HR. 1/10										
						WATER	WIND		AIR TEMP. °C				BARO- METER (mb)										
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	NO. CODE																	
						21	508	935	-011	-015	6	22											
MESSNGR TIME OF HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME AND MALT-2107	Σ Δ D DTN, M. x 10 ³	SOUND VELOCITY	D ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH							
		STD	0000	-0160	3384	2725	0008291	0000	14402	810													
205		OBS	0000	-0160	33838	2725			14402	810	168				207	053	811						
		STD	0010	-0163	3384	2725	0008300	0008	14403	815													
205		OBS	0010	-0163	33835	2725			14403	815	172				235	053	812						
		STD	0020	-0164	3427	2760	0004952	0015	14410	775													
205		OBS	0026	-0166	34439	2774			14412	755	205				255	061	812						
		STD	0030	-0169	3444	2774	0003613	0019	14412	744													
		STD	0050	-0179	3446	2776	0003476	0026	14410	708													
205		OBS	0052	-0180	34456	2776			14410	706	220				213	074	805						
		STD	0075	-0179	3446	2776	0003461	0035	14414	709													
205		OBS	0079	-0179	34455	2776			14415	709	225				279	074	804						
		STD	0100	-0177	3446	2776	0003438	0044	14420	707													
205		OBS	0104	-0176	34457	2776			14421	706	227				212	075	805						
		STD	0125	-0174	3447	2777	000333	0052	14425	693													
		STD	0150	-0173	3448	2777	0003245	0060	14430	679													
205		OBS	0157	-0172	34482	2778			14432	676	225				226	078	796						
		STD	0200	-0151	3449	2778	0003209	0076	14449	661													
205		OBS	T0210	-0146	34495	2778			14453	657	229				232	080	802						
		STD	0250	-0129	3452	2779	0003037	0092	14468	632													
		STD	0300	-0100	3455	2781	0002908	0107	14490	601													
205		OBS	0315	-0089	34558	2781			14498	591	244				219	087	801						
		STD	0400	-0002	3463	2783	0002788	0135	14553	533													
205		OBS	0420	0011	34641	2783			14563	522	246				197	098	795						
		STD	0500	0035	3467	2784	000272	0163	14587	488													
205		OBS	0526	0038	34673	2784			14593	483	243				245	103	796						
		STD	0600	0032	3467	2784	0002703	0190	14603	489													
205		OBS	0632	0031	34669	2784			14607	490	246				231	103	796						
		STD	0700	0034	3468	2785	000268	0217	14620	488													
205		OBS	T0740	0035	34678	2785			14627	487	245				220	109	789						
		STD	0800	0032	3468	2785	0002667	0244	14636	489													
205		OBS	T0847	0030	34674	2785			14643	490	221				256	110	794						
170		OBS	T0863	0023	34679	2786			14643	490	220				266	109	797						
		STD	0900	0022	3468	2786	0002570	0270	14648	493													
		STD	1000	0018	3468	2786	0002554	0295	14663	500													
170		OBS	1060	0015	34676	2786			14672	504	215				274	111	800						
		STD	1100	0013	3468	2786	000253	0321	14678	506													
		STD	1200	0008	3467	2786	0002503	0346	14693	512													
		STD	1300	0003	3467	2786	0002475	0371	14707	518													
170		OBS	1308	0003	34671	2786			14708	518	214				286	112	800						
		STD	1400	-0000	3467	2786	0002442	0396	14723	520													
		STD	1500	-0006	3467	2786	0002385	0420	14737	525													
170		OBS	1556	-0010	34671	2787			14745	529	224				256	113	800						
		STD	1750	-0027	3466	2787	0002256	0478	14770	544													
170		OBS	1856	-0045	34656	2787			14780	571	215				251	107	799						
170		OBS	1931	-0062	34655	2788			14785	598	218				260	095	801						
170		OBS	T1984	-0072	34634	2787			14789	586	197				250	096	801						
		STD	2000	-0075	3465	2788	0001848	0529	14791	591													
170		OBS	T2003	-0076	34650	2788			14791	592	217				262	094	803						

REFERENCE		SHIP CODE	LATITUDE ° ' / 10	LONGITUDE ° ' / 10	DEPTH FATHOMS	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAR. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		HDDC STATION NUMBER	
CITY CODE	ID. NO.					10°	1°	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA		TYPE
318037	GL		71565S	051039W		557	11	02	20	040	1968	020	1472	13	00	0	X		X7	7	8	0028
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO- METER (mb)	DRY BULB	WET BULB																
				19	S05	945	-052	-054	6	16												
MESSAGE TIME HR 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - ml/l$	NN $\mu g - ml/l$	NO ₂ -N $\mu g - ml/l$	NO ₃ -N $\mu g - ml/l$	SiO ₄ -Si $\mu g - ml/l$	pH	S C					
		STD	0000	-0181	3395	2734	0007412	0000	14394	780												
044		OBS	0000	-0181	33946	2734			14394	780	191	432	016	225	063	811						
		STD	0010	-0181	3395	2735	0007359	0007	14396	791												
044		OBS	0011	-0181	33953	2735			14396	792	163	080	016	206	062	810						
		STD	0020	-0175	3425	2759	0005078	0014	14404	775												
044		OBS	0027	-0173	34408	2772			14409	763	206		016	246	066	810						
		STD	0030	-0174	3441	2772	0003846	0018	14409	757												
		STD	0050	-0178	3442	2773	0003747	0026	14410	726												
044		OBS	0054	-0179	34422	2773			14411	722	220	14	018	253	073	803						
		STD	0075	-0181	3442	2773	0003694	0035	14413	721												
044		OBS	0081	-0182	34425	2773			14414	720	222	05	013	224	073	805						
		STD	0100	-0184	3443	2773	0003649	0044	14416	722												
044		OBS	0107	-0184	34428	2774			14417	722	216	154	011	286	073	802						
		STD	0125	-0182	3443	2774	0003600	0053	14421	718												
		STD	0150	-0181	3444	2774	0003542	0062	14426	712												
044		OBS	0160	-0180	34440	2774			14428	710	219	065	007	280	072	804						
		STD	0200	-0179	3445	2775	0003464	0080	14435	703												
044		OBS	T0213	-0178	34447	2775			14438	701	219	082	009		073	800						
		STD	0250	-0177	3445	2775	0003403	0097	14444	701												
		STD	0300	-0173	3445	2775	0003388	0114	14455	695												
044		OBS	0317	-0170	34457	2776			14459	692	219	112	008	269	074							
		STD	0400	-0152	3449	2778	0003107	0146	14482	666												
044		OBS	0419	-0143	34496	2778			14489	656	224	095	007	234	078	800						
		STD	0500	-0086	3455	2780	0002911	0176	14530	596												
044		OBS	0521	-0070	34565	2781			14541	581	227	056	009	258	085	798						
		STD	0600	-0000	3461	2781	0002940	0206	14587	526												
044		OBS	0623	0014	34626	2782			14598	515	239	068	006	250	094	795						
		STD	0700	0017	3464	2783	0002831	0234	14612	510												
		STD	0800	0020	3466	2784	0002735	0262	14630	504												
044		OBS	0826	0021	34659	2784			14635	502	243		008	226	101	797						
		STD	0900	0001	3465	2784	0002631	0289	14638	520												
		STD	1000	-0022	3464	2785	0002530	0315	14645	541												
044		OBS	1028	-0028	34637	2785			14647	546	235	111	012	236	099	796						
		STD	1100	-0039	3464	2785	0002429	0340	14654	557												
		STD	1200	-0055	3463	2786	0002313	0363	14663	572												
044		OBS	T1281	-0067	34631	2786			14671	584	233	142	012	253	095	794						
		STD	1300	-0077	3463	2786	0002147	0386	14670	591												
044		OBS	T1333	-0098	34622	2787			14666	606	231	080	006	194	090	799						

REFERENCE	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	NODC STATION NUMBER	MARSDEN SQUARE		STATION TIME (GMT)				TEAB	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
					10"	1"	MO	DAY	HR.1/10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA	TYPE		AMT				
318037	GL	713175	052434W	557	12	02	20	150	1968		021		1777	18	00	0	X				7	8	0029		
					WATER		WIND		BARO- METER (mb)		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE			DRY BULB	WET BULB													
								16	S05	946	-044	-047	6	21											
	MESSAGE TIME HR 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C		S ‰		SIGMA-T		SPECIFIC VOLUME ANOMALY-300°		Σ Δ σ DYN. M. X 10 ²		SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - ml/l	NH ₃ -N µg - ml/l	NO ₂ -N µg - ml/l	NO ₃ -N µg - ml/l	SiO ₄ -Si µg - ml/l	pH			
			STD	0000	-0172		3408		2745		0006411		0000		14400	771									
	163		OBS	0000	-0172		34079		2745						14400	771	211	777	024	216	069	816			
			STD	0010	-0180		3408		2745		0006378		0006		14398	781									
	163		OBS	0010	-0180		34080		2745						14398	781	202	423	018	215	068	817			
			STD	0020	-0182		3409		2746		0006290		0013		14399	778									
	163		OBS	0025	-0183		34095		2746						14399	775	203	016	018	220	069	816			
			STD	0030	-0182		3413		2749		0005975		0019		14401	766									
			STD	0050	-0179		3427		2761		0004895		0030		14408	735									
	163		OBS	0051	-0179										734	211	274	021	208	073	815				
			STD	0075	-0180		3440		2771		000388*		0041		14413	714									
	163		OBS	0077	-0180										713	220	155	020	238	071	813				
			STD	0100	-0182		3448		2778		0003247		0050		14418	712									
	163		OBS	0102	-0182		34484		2778						14418	712	225	110	017	252	072	814			
			STD	0125	-0181		3449		2778		0003159		0058		14422	708									
			STD	0150	-0179		3449		2778		0003149		0066		14427	703									
	163		OBS	0153	-0179		34491		2779						14428	702	226	175	012	204	073	813			
			STD	0200	-0177		3449		2778		0003126		0081		14437	697									
	163		OBS	0205	-0176		34490		2778						14438	696	220	101	007	247	073	813			
			STD	0250	-0122		3455		2782		0002835		0096		14472	688									
			STD	0300	-0072		3460		2784		0002656		0110		14504	661									
	163		OBS	T0306	-0137P		34606		2787P							656	228	192	010	219	079	812			
			STD	0400	-0002		3463		2783		000281*		0137		14553	539									
	163		OBS	0410	0003		34629		2783						14557	532	234	144	008	275	091	804			
			STD	0500	0028		3465		2783		0002824		0165		14584	517									
	163		OBS	T0513	0030		34652		2783						14587	516	239	178	009	234	096	804			
	145		OBS	T0588	0029		34667		2784						14599	512	231		012	231	102	792			
			STD	0600	0029		3467		2784		0002720		0193		14601	512									
	163		OBS	T0616	0028		34662		2784						14603	513	236	174	011		100	792			
	145		OBS	0694	0028		34671		2785						14617	517	216	123	009	246	103	795			
			STD	0700	0028		3467		2785		000267*		0220		14618	516									
	145		OBS	0796	0027		34672		2785						14633	511	212	106	013	265	106	796			
			STD	0800	0027		3467		2785		0002658		0247		14634	511									
			STD	0900	0024		3467		2785		0002630		0273		14649	513									
	145		OBS	0999	0020		34674		2785						14664	515	221	159	009	239	110	796			
			STD	1000	0020		3467		2785		0002592		0299		14664	515									
			STD	1100	0018		3467		2785		0002577		0325		14680	519									
			STD	1200	0011		3467		2786		0002526		0351		14694	524									
	145		OBS	T1254	0006		34673		2786						14701	526	213	153	012	247	112	797			
			STD	1300	0000		3467		2786		0002454		0375		14706	532									
			STD	1400	-0015		3466		2786		0002397		0400		14716	549									
			STD	1500	-0033		3466		2787		0002234		0423		14724	570									
	145		OBS	1505	-0034		34657		2787						14725	571	236	270	018	229	107	796			
	145		OBS	T1690	-0077		34643		2787						14736	622	231	149	010	233	094	794			
	145		OBS	1743	-0096		34641		2788						14737	636	226	229	010	211	090	796			
			STD	1750	-0099		3464		2788		0001778		0473		14736	636									
	145		OBS	T1775	-0113		34634		2788						14734	635	217	138	014	217	088	799			

REFERENCE		SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	DEPTH METER	MARSden SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
CITY CODE	ID. NO.					10°	1°	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT	
318	037	GL	71019S	052521W	557	12	02	21	150	1968		022		2312	23	00	0	X			7	8		0030
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS												
COLOR CODE	TRANS. mm	DIR.	SPEED OR FORCE	DBY BULB	WET RULR																			
				00	500	978	-001	-011	7	24														
MESSAGE TIME HR 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ OYN. M. & 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - ml/l$	NH ₄ ⁺ -N $\mu g - ml/l$	NO ₂ -N $\mu g - ml/l$	NO ₃ -N $\mu g - ml/l$	SiO ₄ -Si $\mu g - ml/l$	pH	S C							
		STD	0000	-0173	3418	2753	0005655	0000	14401	741														
156		OBS	0000	-0173	34177	2753			14401	741	204			177	073	813								
		STD	0010	-0182	3417	2752	0005705	0006	14398	745														
156		OBS	0010	-0182	34167	2752			14398	745	204	186	019	212	073	814								
		STD	0020	-0182	3418	2753	000562*	0011	14400	750														
156		OBS	0025	-0182	34182	2754			14401	751	204	266	022	238	074	809								
		STD	0030	-0181	3426	2760	0004981	0017	14403	750														
		STD	0050	-0175	3447	2777	0003370	0025	14412	746														
156		OBS	0051	-0175	34473	2777			14413	746	211	185	020	259	077	814								
		STD	0075	-0178	3448	2778	0003272	0033	14415	699														
156		OBS	0076	-0178	34485	2778			14416	698	217	20	015	272	076	813								
		STD	0100	-0175	3449	2778	0003196	0041	14421	712														
156		OBS	0103	-0175	34489	2778			14422	713	213	174	012	269	077	812								
		STD	0125	-0173	3449	2778	0003174	0049	14426	712														
		STD	0150	-0170	3449	2778	0003151	0057	14432	706														
		STD	0200	-0165	3450	2779	0003109	0073	14442	679														
156		OBS	0204	-0165	34497	2779			14443	676	221	124	008	258	085	812								
		STD	0250	-0104	3454	2780	0002984	0088	14480	632														
156		OBS	T0254	-0099	34542	2780			14483	628	219	151	010	247	092	810								
		STD	0300	-0048	3458	2781	0002926	0103	14515	578														
156		OBS	0307	-0041	34590	2782			14519	572	226	205	011	257	100	810								
		STD	0400	0024	3465	2783	0002797	0132	14565	532														
156		OBS	0409	0027	34651	2783			14568	529	232	215	017	275	102	806								
		STD	0500	0027	3466	2784	0002742	0159	14584	511														
156		OBS	0511	0027	34662	2784			14585	510	231	198	023	239	102	806								
		STD	0600	0026	3466	2784	0002739	0187	14600	514														
156		OBS	T0615	0026	34660	2784			14602	515	230		018	241	105	801								
114		OBS	T0628	0026	34661	2784			14604	512	238	266	015	269	106	803								
		STD	0700	0028	3467	2784	0002703	0214	14618	510														
156		OBS	T0717	0029	34668	2784			14621	510	230	278	011		106	806								
114		OBS	0735	0029	34667	2784			14624	511	235	195	015	271	110	805								
114		OBS	0786	0025	34665	2784			14630	512	240	153	012	258	107	809								
		STD	0800	0025	3467	2784	0002696	0241	14633	515														
114		OBS	0898	0022	34668	2785			14648	529	252	191	012	258	108	807								
		STD	0900	0022	3467	2785	0002652	0268	14648	529														
114		OBS	T0993	0017	34664	2785			14662	529	242	084	015	285	110	809								
		STD	1000	0017	3466	2785	0002644	0294	14663	529														
		STD	1100	0013	3466	2785	0002611	0320	14678	530														
		STD	1200	0008	3466	2785	0002576	0346	14692	531														
114		OBS	1245	0006	34663	2785			14699	531	242	141	009	251	111	806								
		STD	1300	0002	3466	2785	0002547	0372	14707	534														
		STD	1400	-0005	3466	2785	0002484	0397	14720	539														
		STD	1500	-0012	3466	2786	0002417	0422	14734	544														
114		OBS	T1505	-0012	34658	2786			14735	544	244	254	013	246	110	806								
		STD	1750	-0014	3466	2786	0002406	0482	14776	551														
114		OBS	1806	-0016	34655	2786			14784	555	242	162	009	214	113	792								
		STD	2000	-0026	3465	2786	0002311	0541	14813	573														
114		OBS	T2117	-0042	34646	2786			14826	588	232		037	235	104	790								
114		OBS	2265	-0072	34643	2787			14837	612	228	212	034	252	095	795								
114		OBS	2310	-0093	34635	2787			14835	634	226	209	011	244		810								

REFERENCE	SHIP	LATITUDE	LONGITUDE	DRAFT	MARS DEN		STATION TIME		YEAR	ORIGINATOR'S		DEPTH	MAX. DEPTH	WAVE			WEA-	CLOUD	NOQC				
CODE	ID. NO.	CODE	1/10	1/10	FOOT	SQUARE	10"	1"	MO	DAY	HR. 1/10	NO.	STATION	TO	OF	DIR.	HGT	PER	SEA	TYPE	AMT	STATION	NUMBER
318037	GL	70516S	052159W		557	02 02 22	060	1968		023		2561	25	00	0	X			71	7	8		0031
					WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS										
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BAND-METER (mb)	DRY BULB	WET BULB	VIS. CODE											
								06	S05	984	-031	-033	6	24									
MESSAGE TIME OF NR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₄ -N μg - at/l	NO ₃ -N μg - at/l	NO ₃ -N μg - at/l	Si O ₄ -Si μg - at/l	pH	S C D					
		STD	0000	-0183	3413	2749	0006024		0000	14396	755												
076		OBS	0000	-0183	34126	2749				14396	755	215		016	257	072	809						
		STD	0010	-0183	3412	2749	0006048		0006	14397	762												
076		OBS	0010	-0183	34122	2749				14397	762	209	299	013	233	073	813						
		STD	0020	-0184	3413	2749	0006017		0012	14399	783												
076		OBS	0026	-0184	34126	2749				14399	788	217	318	025	220	073	816						
		STD	0030	-0182	3420	2755	0005438		0018	14402	780												
		STD	0050	-0173	3447	2777	0003375		0027	14413	747												
076		OBS	0051	-0173	34474	2777				14414	746	220	271	013	137	075	819						
		STD	0075	-0177	3449	2778	0003222		0035	14416	731												
076		OBS	0077	-0177	34488	2778				14416	729	230	073	011	263	076	818						
		STD	0100	-0176	3449	2778	0003186		0043	14421	701												
076		OBS	0102	-0176	34493	2779				14421	699	230	273	006	258	076	818						
		STD	0125	-0170	3450	2779	0003129		0051	14428	693												
		STD	0150	-0163	3450	2779	0003091		0059	14435	687												
		STD	0200	-0148	3452	2780	0003027		0074	14451	674												
076		OBS	0205	-0147	34516	2780				14452	673	234	143	003	213	079	814						
		STD	0250	-0106	3454	2780	0002976		0089	14479	630												
076		OBS	T0254	-0102	34548	2781				14482	626	231	097	003	232	083	810						
		STD	0300	-0040	3460	2782	0002815		0103	14519	577												
076		OBS	0308	-0031	34606	2782				14524	570	239	243	007	263	089	808						
		STD	0400	0021	3465	2783	0002778		0131	14564	520												
076		OBS	0410	0024	34655	2784				14567	517	235	128	010	279	096	805						
		STD	0500	0020	3466	2784	0002731		0159	14580	523												
076		OBS	0513	0019	34655	2784				14582	524	234	059	005	290	098	805						
		STD	0600	0020	3466	2784	0002696		0186	14597	516												
076		OBS	T0614	0020	34662	2784				14599	515	234	130	008	272	100	806						
076		OBS	T0671	0019	34664	2785				14608	512	234	079	005	261	100	805						
		STD	0700	0020	3467	2785	0002621		0213	14614	511												
047		OBS	T0755	0023	34677	2785				14625	510	240	042	005	304	102	815						
		STD	0800	0025	3467	2785	0002628		0239	14633	509												
047		OBS	0803	0025	34674	2785				14633	509	240	044	002	266	104	810						
047		OBS	0854	0024	34674	2785				14642	543	231	094	004	298	105	817						
		STD	0900	0022	3467	2785	0002607		0265	14648	532												
047		OBS	0955	0019	34675	2785				14656	524	239	060	003		108	818						
		STD	1000	0017	3468	2786	0002562		0291	14663	524												
147		OBS	T1057	0014	34675	2786				14671	525	241	079	008	280	109	814						
		STD	1100	0012	3467	2785	0002559		0316	14677	526												
		STD	1200	0008	3467	2786	0002522		0342	14692	528												
		STD	1300	0004	3467	2786	0002483		0367	14707	530												
047		OBS	1311	0003	34669	2786				14709	530	242	088	005	194	111	814						
		STD	1400	0000	3467	2786	0002457		0392	14723	532												
		STD	1500	-0003	3467	2786	0002433		0416	14738	535												
047		OBS	T1574	-0005	34668	2786				14750	538	249	168	004	252	113	810						
		STD	1750	-0010	3467	2786	0002369		0476	14778	549												
047		OBS	1871	-0013	34665	2786				14797	555	244	116	009	214	112	809						
		STD	2000	-0017	3466	2786	0002307		0534	14817	558												
047		OBS	2189	-0022	34660	2786				14847	562	242	327	007	301	110	806						
047		OBS	2484	-0066	34645	2787				14878	608	232	084	006	276	094	808						
		STD	2500	-0069	3465	2787	0001833		0638	14879	611												
047		OBS	2536	-0076	34646	2788				14883	618	227	132	008	267	092	809						

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	WIND DIRECTION	MARSOEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR	1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
31	8037	GL	70569S	050265W		557	00	02	23	060	1968		025	2926	11	00	0	X		73	7	8		0032

318037	GL	70569S	050265W	557	00	02	23	060	1968			025	2926	11	00	0	X			73	7	8		0032
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WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			

			10	S27	825	-022	-024	6	15
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MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \sigma$ OBS. - MEAN $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{at/l}$	NH ₃ -N $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	SiO ₂ -Si $\mu\text{g} - \text{at/l}$	pH	3 C
		STD	0000	-0184	3408	2745	0006360	0000	14394	744							
	070	OBS	0000	-0184	34082	2745			14394	744	205	464	014	248	080	808	
		STD	0010	-0184	3408	2745	0006369	0006	14396	779							
	070	OBS	0011	-0184	34077	2745			14396	781	204	222	020	175	077	812	
		STD	0020	-0184	3408	2745	0006385	0013	14398	774							
	070	OBS	0028	-0184	34076	2745			14399	765	206	185	016	216	079	807	
		STD	0030	-0183	3412	2749	0006050	0019	14400	761							
		STD	0050	-0173	3443	2773	0003683	0029	14413	728							
	070	OBS	0055	-0172	34480	2777			14415	722	213	160	013	220	077	808	
		STD	0075	-0173	3449	2778	000321	0037	14418	705							
	070	OBS	0083	-0173	34493	2779			14419	699	220	508	016	210	079	803	
		STD	0100	-0166	3450	2779	0003138	0045	14425	686							
	070	OBS	0110	-0163	34501	2779			14429	680	217			205	081	807	
		STD	0125	-0163	3450	2779	000311	0053	14431	677							
		STD	0150	-0163	3451	2779	0003065	0061	14435	671							
		STD	0200	-0164	3451	2780	0002984	0076	14443	659							
	070	OBS	T0222	-0164	34517	2780			14447	654	220	158	006	183	080	805	
		STD	0250	-0116	3456	2782	0002783	0090	14475	613							
		STD	0300	-0048	3462	2784	0002622	0104	14515	557							
	070	OBS	0331	-0018	34640	2785			14535	534	230	404	010	268	090	792	
		STD	0400	0005	3464	2784	0002732	0131	14557	529							
	070	OBS	0441	0013	34645	2783			14567	526	230	177	020	294	094	798	
		STD	0500	0014	3465	2784	0002729	0158	14577	521							
	070	OBS	T0552	0014	34653	2784			14586	517	230	312	012	232	092	799	
		STD	0600	0016	3466	2784	0002697	0185	14595	513							
	070	OBS	0662	-01710	34660	27920			510	233	446	023	214	097	798		
		STD	0700	0019	3466	2784	0002685	0212	14613	510							
	070	OBS	0772	0022	34664	2784			14627	508	235	212	016		100	798	
		STD	0800	0021	3467	2785	0002659	0239	14631	506							
	070	OBS	0883	0018	34670	2785			14644	504	232	189	008	251	095	797	
		STD	0900	0018	3467	2785	0002604	0265	14646	506							
		STD	1000	0015	3467	2785	0002583	0291	14662	517							
	070	OBS	T1001	0015	34665	2785			14662	517	237	289	007	231	096	795	
		STD	1100	0011	3466	2785	0002595	0317	14677	518							
	070	OBS	T1103	0011	34664	2785			14677	518	235	270	008	272	100	796	

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REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	OBS INSTR	MARSOEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR.	1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT PER	SEA		TYPE	AMT	
31	8037	GL	70282S	046584W	556	06	02	25	060	1968		027		3173	10	00	01	X		71	6	8	0034
		WATER		WIND		BARO- METER (mb)		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS									
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS														
					24	507	926	-021	-029	6	16												
MESSAGE TIME NR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ ρ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	NH ₃ -N μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S C						
		STD	0000	-0179	3400	2739	0006978	0000	14396	748													
	049	OBS	0000	-0179	34003	2739			14396	748	204	619	028	232	087	815							
		STD	0010	-0181	3399	2738	0007052	0007	14396	779													
	049	OBS	0010	-0181	33992	2738			14396	779	209	35	025	320	087	813							
		STD	0020	-0174	3415	2751	0005848	0013	14403	754													
	049	OBS	0025	-0172	34220	2756			14406	741	213	299	021	320	090	814							
		STD	0030	-0172	3430	2763	0004696	0019	14408	723													
		STD	0050	-0169	3450	2779	0003156	0027	14416	670													
	049	OBS	0052	-0169	34509	2780			14416	666	222	369	016	260	092	813							
		STD	0075	-0157	3451	2779	0003101	0034	14426	643													
	049	OBS	0078	-0155	34514	2780			14427	642	232	217	020	253	093	812							
		STD	0100	-0146	3452	2780	0003045	0042	14435	644													
	049	OBS	0104	-0143	34525	2780			14437	644	223	166	012	248	092	813							
		STD	0125	-0108	3455	2781	0002937	0050	14458	617													
		STD	0150	-0071	3458	2782	0002851	0057	14479	588													
	049	OBS	0155	-0065	34584	2782			14483	583	237	165	018	262	093	810							
		STD	0200	-0018	3462	2783	0002761	0071	14513	543													
	049	OBS	T0207	-0013	34630	2783			14516	538	238	206	012	241	094	810							
		STD	0250	-0004	3464	2784	0002726	0085	14528	528													
		STD	0300	0006	3465	2784	0002711	0098	14541	519													
	049	OBS	0312	0008	34649	2784			14543	517	238	137	011	267	096	809							
		STD	0400	0022	3466	2784	0002708	0125	14565	509													
	049	OBS	0416	0023	34665	2784			14568	508	239	368	014	291	100	807							
		STD	0500	0025	3467	2785	0002666	0152	14583	506													
	049	OBS	0520	0025	34669	2785			14586	506	234	239	008	285	100	806							
		STD	0600	0025	3467	2785	0002655	0179	14599	508													
	049	OBS	0624	0024	34671	2785			14603	510	234	120	013	252	101	805							
		STD	0700	0019	3467	2785	0002614	0205	14613	522													
	049	OBS	T0729	0018	34666	2785			14618	524	233	236	014	241	103	806							
		STD	0800	0017	3467	2785	0002630	0231	14629	523													
	049	OBS	T0833	0016	34666	2785			14634	522	250	067	011	289	103	805							
		STD	0900	0013	3467	2785	0002592	0257	14644	532													
	049	OBS	T0932	0012	34667	2785			14649	534	244	246	009	270	118	804							
		STD	1000	0009	3466	2785	0002612	0283	14659	533													
	049	OBS	T1035	0008	34658	2785			14664	530	242	154	012	260	119	803							

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH 1000	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER								
CTRY CODE	IO. HO.					10"	1"	MO	DAY		HR.	1/10			CRUISE NO.	STATION NUMBER	DIR.	HGT.		PER	SEA		TYPE	AMT						
31	8037	GL	701435	050103W	557	00	02	25	210	1968		028	3265	33	00	0	X		71	7	8		0035							
						WATER		WIND		BARO- METER (mba)		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS														
COLOR CODE		TRANS. (m)		DIR.		SPEED OR FORCE		DRY RULE		WET BULB																				
								10		S14	865	-029 -032		6	27															
MESSENGER TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-2107		$\Sigma \Delta \sigma$ DTN, M. X 10 ³		SOUND VELOCITY		O ₂ ml/l	PO ₄ -P µg - at/l	NH ₃ -N µg - at/l	NO ₂ -N µg - at/l	NO ₃ -N µg - at/l	SiO ₄ -Si µg - at/l	pH										
		STD	0000	-0180	3419	2754		0005508		0000		14398		708																
214		OBS	0000	-0180	34194	2754						14398		708	218	166	037	214	085											
		STD	0010	-0183	3419	2755		0005495		0006		14398		714																
214		OBS	0010	-0183	34194	2755						14398		714	213	175	037	221	085	816										
		STD	0020	-0184	3420	2755		0005464		0011		14400		714																
214		OBS	0026	-0184	34199	2755						14400		714	217	213	027	191	085	817										
		STD	0030	-0182	3426	2760		0004977		0016		14403		710																
		STD	0050	-0173	3447	2777		0003375		0025		14413		688																
214		OBS	0051	-0173	34481	2778						14414		687	220	074	027	204	088	813										
		STD	0075	-0173	3450	2779		0003132		0033		14418		662																
214		OBS	0077	-0173	34502	2779						14418		661	225	202	025	221	088	808										
		STD	0100	-0168	3451	2780		0003056		0040		14425		657																
214		OBS	0103	-0167	34512	2780						14426		656	236	046	018	216	088	807										
		STD	0125	-0162	3452	2780		0002983		0048		14432		649																
		STD	0150	-0147	3453	2781		0002949		0055		14443		636																
214		OBS	0154	-0144	34530	2781						14445		633	228	078	026	244												
		STD	0200	-0085	3457	2782		0002853		0070		14481		594																
214		OBS	T0205	-0080	34574	2782						14484		590	234	109	016	238	092	804										
		STD	0250	-0043	3461	2783		0002732		0084		14509		566																
		STD	0300	-0014	3463	2784		0002727		0098		14531		546																
214		OBS	0308	-0010	34634	2784						14534		544	240	272	017	232	097	803										
		STD	0400	0007	3465	2784		000269*		0125		14558		532																
214		OBS	0411	0009	34652	2784						14560		531	224	152	023	261	101	800										
		STD	0500	0018	3466	2784		0002683		0151		14579		520																
214		OBS	0513	0019	34665	2785						14582		519	230	133	018	255	108	801										
		STD	0600	0021	3466	2784		000267		0178		14597		516																
214		OBS	0615	0021	34664	2784						14600		515	231	195	020	233	110	801										
		STD	0700	0019	3466	2784		0002676		0205		14613		509																
214		OBS	T0717	0019	34661	2784						14616		508	230	203	006	213	109	799										
		STD	0800	0017	3466	2784		0002675		0232		14629		514																
214		OBS	T0826	0016	34657	2784						14633		518	229	037	021	220	114	800										
		STD	0900	0014	3466	2784		0002659		0258		14645		539																
214		OBS	T0920	0013	34660	2785						14647		545	229	185	018	228	114	799										
184		OBS	T0932	0012	34670	2785						14649		530	240	316	018	219	114	800										
		STD	1000	0010	3466	2785		0002602		0285		14659		521																
214		OBS	T1021	0009	34659	2785						14663		518	230	136	027	242	113	802										
184		OBS	1033	0009	34665	2785						14665		529	238	106	022		118	802										
		STD	1100	0007	3467	2785		0002556		0310		14675		530																
		STD	1200	0003	3466	2785		0002528		0336		14690		532																
184		OBS	1287	0000	34664	2786						14703		536	239	06	014	258	119	800										
		STD	1300	-0001	3466	2786		0002491		0361		14705		537																
		STD	1400	-0004	3466	2786		0002467		0386		14721		547																
		STD	1500	-0008	3466	2786		0002434		0410		14736		553																
184		OBS	1540	-0009	34661	2786						14742		555	234	36	022	226	115	801										
		STD	1750	-0013	3465	2785		0002430		0471		14776		555																
184		OBS	1646	-0015	34651	2785						14791		555	240	235	012	256	117	800										
		STD	2000	-0019	3465	2786		0002365		0531		14816		557																
184		OBS	T2162	-0022	34654	2786						14843		559	238		018	216	113	799										
184		OBS	2462	-0026	34651	2786						14892		576	239	160	013	288	116	799										
		STD	2500	-0026	3465	2786		0002257		0647		14899		577																
184		OBS	T2776	-0031	34649	2786						14945		583	240	050	014	217	114	799										
		STD	3000	-0032	3465	2786		0002160		0757		14983		587																
184		OBS	T3080	-0041	34645	2786						14993		588	240	045	013	215	112	799										
184		OBS	3209	-0066	34643	2787						15005		635	232	096	006	280	095	799										
184		OBS	T3260	-0080	34639	2787						15007		626	237	137	029	207	094	799										

REFERENCE CITY CODE	ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
						10"	1"	MO	DAY	HR.	1/10		CRUISE NO.	STATION NUMBER			DR.	HGT	PER	SEA		TYPE	AMT	

318037 GL 70118S 051207W 557 01 02 26 090 1968 029 3167 10 00 01 X 6 8 0036

WATER		WIND		BARO- METER		AIR TEMP. °C		VIL CODE	ND, OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. mm	DIR.	SPEED CM FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB			
			18	S17	868	-042	-052	6	07	

MESSENGER TIME NR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SDUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	NN ₃ -N μg - ml/l	ND ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	Si D ₄ -Si μg - ml/l	pH	S C
072	OBS	T0378	0009	34655	2784				14554	531	225	242	021	215	106	804	
	STD	0400	0014	3466	2784		0002658		14560	525							
072	OBS	T0474	0023	34668	2785				14577	512	228	263	022	249	109	804	
	STD	0500	0023	3467	2785		0002640		14581	513							
072	OBS	0571	0022	34674	2785				14593	515	232	333	015	256	108	801	
	STD	0600	0021	3467	2785		0002598		14597	515							
072	OBS	0668	0019	34673	2785				14607	515	232	278	023		112	800	
	STD	0700	0019	3467	2785		0002592		14613	511							
072	OBS	0764	0018	34673	2785				14623	510	237	109	018	245	112	801	
	STD	0800	0016	3467	2785		0002578		14628	517							
072	OBS	0862	0013	34670	2785				14637	524	233	188	017	238	116	802	
	STD	0900	0011	3467	2785		0002554		14643	523							
072	OBS	0959	0007	34667	2785				14651	522	247	063	019	204	109	805	

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH FOOT	MARSSEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		HODC STATION NUMBER					
CITY CODE	IO. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT				
31	8037	GL	693335	048473W		520	98	02	27	060	1968		030	3656	36	00	0	X		71	6	8	0037				
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS													
		COLOR CODE		TRANS. M		DIR.		SPEED OR FORCE		DRY BULB		WET BULB															
						18		514		885		-053		-059		6		29									
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ ρ DYN. M. x 10 ³		SOUND VELOCITY		O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	3 CTD						
		STD	0000	-0182	3417	2753		0005657		0000		14397		671													
	063	OBS	0000	-0182	34174	2753						14397		671	213				088	600							
		STD	0010	-0184	3417	2753		0005646		0006		14397		673													
	063	OBS	0010	-0184	34174	2753						14397		673	212				091	806							
		STD	0020	-0185	3418	2753		0005615		0011		14399		680													
	063	OBS	0026	-0185	34179	2753						14400		684	216				091	806							
		STD	0030	-0182	3424	2758		0005131		0017		14403		674													
		STD	0050	-0167	3446	2776		0003469		0025		14416		635													
	063	OBS	0052	-0166	34477	2777						14417		632	223				092	798							
		STD	0075	-0157	3449	2778		0003254		0034		14425		623													
		STD	0100	-0144	3451	2779		0003128		0042		14436		610													
	063	OBS	0104	-0142	34513	2779						14438		607	225				094	793							
		STD	0125	-0131	3453	2780		0003007		0049		14446		588													
		STD	0150	-0110	3455	2781		000292		0057		14461		569													
	063	OBS	0155	-0105	34553	2781						14464		566	226				098	797							
		STD	0200	-0038	3461	2783		0002766		0071		14503		542													
	063	OBS	T0207	-0030	34621	2784						14508		538	233				103	790							
		STD	0250	-0004	3465	2785		0002634		0084		14528		508													
		STD	0300	0016	3466	2784		0002672		0098		14545		485													
	063	OBS	0309	0019	34667	2785						14548		482	234				107	791							
		STD	0400	0023	3467	2785		0002639		0124		14565		477													
	063	OBS	0411	0024	34670	2785						14567		476	234				113	791							
		STD	0500	0028	3468	2785		0002596		0150		14584		473													
	063	OBS	T0508	0028	34682	2786						14586		473	238				112	791							
		STD	0600	0027	3468	2785		0002594		0176		14601		473													
	063	OBS	0612	0027	34678	2785						14602		473	237				113	791							
		STD	0700	0023	3468	2786		0002575		0202		14615		484													
	063	OBS	0713	0022	34679	2786						14617		485	238				117	791							
		STD	0800	0019	3467	2785		0002587		0228		14630		482													
	063	OBS	0814	0019	34673	2785						14633		482	238				116	792							
		STD	0900	0022	3467	2785		0002609		0254		14648		493													
	063	OBS	T0922	0023	34674	2785						14652		494	249				118	789							
		STD	1000	0015	3467	2785		0002561		0280		14662		488													
	063	OBS	T1020	0014	34672	2785						14665		487	233				123	793							
	028	OBS	T1047	0014	34678	2786						14669		487	234				120	797							
	063	OBS	T1060	0012	34671	2785						14671		483	240				119	795							
		STD	1100	0011	3467	2786		0002543		0305		14677		485													
		STD	1200	0008	3467	2786		0002517		0331		14692		491													
	028	OBS	T1296	0005	34671	2786						14707		496	237				121	798							
		STD	1300	0005	3467	2786		0002489		0356		14708		496													
		STD	1400	0001	3467	2786		0002451		0380		14723		502													
		STD	1500	-0002	3467	2786		0002427		0405		14739		507													
	028	OBS	1555	-0004	34670	2786						14747		510	229				120	798							
		STD	1750	-0009	3467	2786		0002378		0465		14778		518													
	028	OBS	1862	-0012	34663	2786						14796		523	234				119	797							
		STD	2000	-0015	3466	2786		0002324		0524		14818		531													
	028	OBS	T2169	-0019	34663	2786						14845		537	233				123	793							
	028	OBS	2475	-0024	34659	2786						14896		534	232				119	790							
		STD	2500	-0024	3466	2786		0002213		0637		14900		535													
	028	OBS	T2781	-0028	34655	2786						14947		544	242				118								
		STD	3000	-0030	3465	2786		0002127		0746		14984		548													
	028	OBS	3087	-0031	34653	2786						14999		550	233				118	791							
	028	OBS	3394	-0039	34644	2786						15049		555	224				115	790							
	028	OBS	3495	-0043	34640	2786						15065		564	231				113	790							
	028	OBS	T3598	-0051	34635	2786						15080		566	232				111	786							
	028	OBS	3624	-0056	34647	2787						15082		582	230				106	786							
	028	OBS	3649	-0060	34648	2787						15085		576	228				105	786							

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
318037	GL		68383S	047200W	520	87	02	27	210	1968		031		3374	30	00	01	X		X7	03	0038
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED DIR FORCE	(mb)	DRY BULB	WET BULB										
						DT	SO	18	S10	871	-060	-063	6	45								
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P $\mu g - ml/l$	NH ₃ -N $\mu g - ml/l$	NO ₂ -N $\mu g - ml/l$	NO ₃ -N $\mu g - ml/l$	SiO ₂ -S $\mu g - ml/l$	pH					
223		STD	0000	-0185	3406	2744	0006535		0000	14394												
		OBS	0000	-0185	34059	2744				14394												
		STD	0010	-0185	3406	2744	0006528		0007	14395												
		OBS	0010	-0185	34059	2744				14395												
		STD	0020	-0185	3406	2744	000652		0013	14397												
		OBS	0020	-0185	34059	2744				14397												
		OBS	0025	-0179	34067	2744				14401												
		STD	0030	-0167	3437	2768	0004186		0018	14411												
		OBS	0030	-0167	34368	2768				14411												
		OBS	0035	-0162	34414	2772				14415												
		OBS	0040	-0165	34418	2772				14415												
		STD	0050	-0167	3444	2774	0003600		0026	14416												
		OBS	0050	-0167	34443	2774				14416												
		OBS	0066	-0150	34488	2777				14427												
		STD	0075	-0154	3448	2777	0003347		0035	14427												
		OBS	0075	-0154	34479	2777				14427												
		OBS	0086	-0147	34493	2778				14432												
		OBS	0090	-0153	34470	2776				14429												
		STD	0100	-0143	3451	2779	0003147		0043	14436												
		OBS	0100	-0143	34508	2779				14436												
		STD	0125	-0123	3454	2781	0002974		0051	14450												
		OBS	0125	-0123	34538	2781				14450												
		STD	0150	-0092	3457	2782	0002854		0058	14469												
		OBS	0150	-0092	34568	2782				14469												
		STD	0200	-0015	3464	2785	0002632		0072	14514												
		OBS	0200	-0015	34643	2785				14514												
		STD	0250	0009	3466	2785	0002654		0085	14534												
		OBS	0250	0009	34657	2785				14534												
		STD	0300	0017	3466	2784	0002685		0098	14546												
		OBS	0300	0017	34659	2784				14546												
		STD	0400	0026	3467	2785	0002666		0125	14567												
		OBS	0400	0026	34669	2785				14567												
		STD	0500	0029	3468	2785	0002627		0151	14585												
		OBS	0500	0029	34677	2785				14585												
		STD	0600	0026	3468	2785	0002609		0178	14600												
		OBS	0600	0026	34677	2785				14600												
	STD	0700	0024	3468	2785	0002597		0204	14616													
	OBS	0700	0024	34677	2785				14616													
	STD	0800	0022	3468	2785	0002584		0230	14632													
	OBS	0800	0022	34677	2785				14632													
	STD	0900	0018	3468	2786	0002554		0255	14647													
	OBS	0900	0018	34677	2786				14647													
	STD	1000	0014	3468	2786	0002531		0281	14662													
	OBS	1000	0014	34676	2786				14662													
	STD	1100	0011	3467	2786	0002528		0306	14677													
	OBS	1100	0011	34673	2786				14677													
	STD	1200	0006	3467	2786	0002523		0331	14691													
	OBS	1200	0006	34668	2786				14691													
	STD	1300	0003	3467	2786	0002494		0356	14707													
	OBS	1300	0003	34668	2786				14707													
	STD	1400	0001	3467	2786	000248		0381	14723													
	OBS	1400	0001	34667	2786				14723													
	STD	1500	-0003	3467	2786	0002448		0406	14738													
	OBS	1500	-0003	34666	2786				14738													
	OBS	1600	-0006	34661	2786				14754													
	OBS	1700	-0010	34659	2786				14769													
	STD	1750	-0012	3466	2786	0002402		0466	14777													
	OBS	1800	-0013	34658	2786				14785													
	OBS	1900	-0016	34658	2786				14800													
	STD	2000	-0014	3466	2786	0002370		0526	14818													
	OBS	2000	-0014	34658	2786				14818													
	OBS	2100	-0019	34658	2786				14833													
	OBS	2200	-0021	34657	2786				14850													
	OBS	2300	-0023	34657	2786				14866													
	OBS	2400	-0025	34656	2786				14882													
	STD	2500	-0026	3466	2786	0002220		0641	14899													
	OBS	2500	-0026	34655	2786				14899													
	OBS	2600	-0027	34654	2786				14916													
	OBS	2700	-0029	34648	2786				14932													
	OBS	2800	-0030	34648	2786				14949													
	OBS	2900	-0033	34643	2786				14965													
	STD	3000	-0034	3464	2785	0002187		0751	14982													
	OBS	3000	-0034	34639	2785				14982													

REFERENCE	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	MARS DEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPLS	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NDOC STATION NUMBER
					MARS DEN SQUARE		STATION TIME (GMT)			CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
					10"	1"	MO	DAY													
318037	GL	683835	047200W	520	87	02	27	210	1968	031		3436	34	00	0	X		70	6	6	0039
				WATER		WIND		BARO- METER	AIR TEMP. °C		VSL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
				COLOB CODE	TRANS. METER	DIR.	SPEED OR FORCE	METER	DRY BULB	WET BULB											
								18	510	871	-060	-063	6	26							
MESSENGER TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°		Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PD ₄ -P μg - ml/l	NH ₃ - N μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	Si D ₄ -Si μg - ml/l	pH				
		STD	0000	-0182	3409	2746	0006318		0000	14395	698										
220		OBS	0000	-0182	34088	2746				14395	698	205						806			
		STD	0010	-0184	3409	2746	0006315		0006	14396	706										
220		OBS	0010	-0184	34087	2746				14396	706	205						806			
		STD	0020	-0184	3409	2746	0006308		0013	14398	706										
220		OBS	0025	-0184	34087	2746				14399	702	199						796			
		STD	0030	-0178	3418	2753	0005602		0019	14404	687										
		STD	0050	-0163	3442	2772	0003779		0028	14417	649										
220		OBS	0050	-0163	34421	2772				14417	649	213						804			
		STD	0075	-0160	3448	2777	000336		0037	14424	650										
220		OBS	0075	-0160	34475	2777				14424	650	215						801			
		STD	0100	-0154	3450	2778	0003212		0045	14431	600										
220		OBS	0100	-0154	34495	2778				14431	600	224						795			
		STD	0125	-0146	3452	2780	0003056		0053	14439	596										
		STD	0150	-0124	3454	2781	0002952		0060	14454	581										
220		OBS	0151	-0123	34540	2781				14455	580	240						798			
		STD	0200	-0037	3461	2783	0002771		0075	14504	517										
220		OBS	T0201	-0036	34615	2783				14504	516	237						786			
		STD	0250	-0002	3465	2785	0002646		0088	14529	496										
220		OBS	0274	0009	34656	2784				14538	489	233						792			
		STD	0300	0011	3466	2785	0002642		0102	14543	485										
220		OBS	0363	0017	34668	2785				14556	478	233						790			
		STD	0400	0023	3467	2785	0002639		0128	14565	475										
220		OBS	T0449	0029	34678	2785				14576	473	233						788			
		STD	0500	0030	3468	2785	0002621		0154	14585	472										
220		OBS	T0530	0031	34679	2785				14591	471	257						792			
		STD	0600	0028	3468	2785	0002608		0180	14601	472										
220		OBS	0688	0025	34680	2786				14614	473	236						791			
		STD	0700	0025	3468	2786	0002581		0206	14616	474										
		STD	0800	0021	3468	2786	0002554		0232	14631	480										
220		OBS	T0850	0019	34678	2786				14639	483	234						790			
		STD	0900	0018	3468	2786	0002543		0257	14646	485										
		STD	1000	0015	3468	2786	0002520		0283	14662	489										
186		OBS	T1016	0014	34678	2786				14664	490	239						802			
		STD	1100	0012	3468	2786	0002506		0308	14677	493										
		STD	1200	0009	3468	2786	000248		0333	14693	497										
186		OBS	1270	0006	34676	2786				14703	500	243						796			
		STD	1300	0004	3468	2786	000245		0357	14708	502										
		STD	1400	-0000	3467	2786	0002427		0382	14723	508										
		STD	1500	-0004	3467	2786	0002402		0406	14738	513										
186		OBS	1523	-0005	34670	2786				14741	514	240						799			
		STD	1750	-0011	3467	2787	000233		0465	14777	518										
186		OBS	1830	-0013	34665	2786				14790	521	238						788			
		STD	2000	-0018	3466	2786	0002294		0523	14817	532										
186		OBS	2136	-0021	34662	2786				14839	537	236						793			
186		OBS	T2443	-0025	34661	2787				14890	539	236						798			
		STD	2500	-0025	3466	2786	0002195		0635	14900	541										
186		OBS	2752	-0029	34656	2786				14941	550	238						796			
		STD	3000	-0035	3465	2786	0002096		0742	14982	558										
186		OBS	3063	-0038	34648	2786				14992	561	236						794			
186		OBS	3321	-0052	34638	2786				15030	573	230						793			
186		OBS	T3368	-0057	34644	2787				15037	576	233						792			
186		OBS	3400	-0068	34643	2787				15037	589	226						796			
186		OBS	T3434	-0078	34647	2788				15039	590	228						802			

REFERENCE		SHIP CODE	LATITUDE ° '"/10	LONGITUDE ° '"/10	DRAUGHT M	MARSEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER		
CITY CODE	IO. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			OR.	HGT	PER		SEA	TYPE		AMT	
318037		GL	68383S	047200W		520	87	02	28	150	1968		032	3374	31	00	0	X		X7	0	3	0040	
						WATER		WIND		BARO- METER (mba)	AIR TEMP. °C		VEL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
						COLOR CODE	TRANS (m)	OR.	SPEED OR FORCE		DRY BULB	WET BULB												
						DT	SD	22	S09	894	-108	-115	6	41										
MESSNGR TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta \sigma_t$ OYN. M. $\times 10^2$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - dl/l$	NH ₃ -N $\mu g - dl/l$	NO ₂ -N $\mu g - dl/l$	NO ₃ -N $\mu g - dl/l$	SiO ₄ -Si $\mu g - dl/l$	pH	S C						
		STD	0000	-0181	3399	2738	0007089		0000	14395														
157		OBS	0000	-0181	33988	2738				14395														
		STD	0010	-0185	3410	2747	0006213		0007	14396														
		OBS	0010	-0185	34100	2747				14396														
005		STD	0020	-0172	3436	2768	0004256		0012	14407														
		OBS	0020	-0172	34358	2768				14407														
		OBS	0025	-0171	34398	2771				14409														
		STD	0030	-0171	3442	2773	0003754		0016	14410														
		OBS	0030	-0171	34423	2773				14410														
		STD	0050	-0168	3446	2776	0003444		0023	14416														
		OBS	0050	-0168	34463	2776				14416														
		STD	0075	-0164	3449	2778	0003257		0031	14422														
		OBS	0075	-0164	34487	2778				14422														
		STD	0100	-0154	3451	2779	0003112		0039	14431														
		OBS	0100	-0154	34508	2779				14431														
		STD	0125	-0130	3454	2781	0002903		0047	14447														
		OBS	0125	-0130	34544	2781				14447														
		STD	0150	-0080	3457	2782	0002881		0054	14475														
		OBS	0150	-0080	34571	2782				14475														
		STD	0200	-0004	3465	2784	0002653		0068	14519														
		OBS	0200	-0004	34648	2784				14519														
		STD	0250	0006	3466	2785	0002630		0081	14532														
		OBS	0250	0006	34658	2785				14532														
		STD	0300	0015	3467	2785	0002605		0094	14545														
		OBS	0300	0015	34668	2785				14545														
		STD	0400	0024	3468	2785	0002585		0120	14566														
		OBS	0400	0024	34678	2785				14566														
		STD	0500	0031	3469	2786	0002565		0146	14586														
		OBS	0500	0031	34687	2786				14586														
		STD	0600	0031	3469	2786	0002561		0172	14602														
		OBS	0600	0031	34688	2786				14602														
		STD	0700	0030	3469	2786	0002557		0197	14619														
		OBS	0700	0030	34688	2786				14619														
		STD	0800	0026	3469	2786	0002531		0223	14634														
		OBS	0800	0026	34688	2786				14634														
		STD	0900	0021	3469	2786	0002502		0248	14648														
		OBS	0900	0021	34687	2786				14648														
		STD	1000	0017	3468	2786	0002502		0273	14663														
		OBS	1000	0017	34683	2786				14663														
		STD	1100	0013	3468	2786	0002499		0298	14678														
		OBS	1100	0013	34679	2786				14678														
		STD	1200	0009	3468	2786	0002473		0323	14693														
		OBS	1200	0009	34678	2786				14693														
		STD	1300	0006	3468	2786	0002445		0347	14709														
		OBS	1300	0006	34678	2786				14709														
		STD	1400	0002	3468	2787	0002407		0372	14724														
		OBS	1400	0002	34678	2787				14724														
		STD	1500	-0002	3468	2787	0002368		0395	14739														
		OBS	1500	-0002	34678	2787				14739														
		OBS	1600	-0005	34677	2787				14754														
		OBS	1700	-0009	34673	2787				14770														
		STD	1750	-0011	3467	2787	0002308		0454	14777														
		OBS	1800	-0013	34673	2787				14785														
		OBS	1900	-0015	34669	2787				14801														
		STD	2000	-0017	3467	2787	0002267		0511	14817														
		OBS	2000	-0017	34668	2787				14817														
		OBS	2100	-0019	34667	2787				14833														
		OBS	2200	-0021	34667	2787				14850														
		OBS	2300	-0023	34663	2787				14866														
		OBS	2400	-0025	34661	2787				14882														
		STD	2500	-0026	3466	2787	0002184		0622	14899														
		OBS	2500	-0026	34660	2787				14899														
		OBS	2600	-0027	34659	2787				14916														
		OBS	2700	-0029	34658	2787				14932														
		OBS	2800	-0031	34658	2787				14949														
		OBS	2900	-0032	34658	2787				14966														
		STD	3000	-0034	3466	2787	0002071		0729	14982														
		OBS	3000	-0034	34655	2787				14982														
		OBS	3100	-0036	34648	2786				14999														

REFERENCE		SNIP CODE	LATITUDE 1/10	LONGITUDE 1/10	PORT INDIC	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
CTRY CODE	ID. NO.					10"	1"	MO	OAT	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT			
31	8037	GL	68204S	049210W		520	89	02	28	180	1968		032		3541	35	00	0	X		71	7	8		0041
		WATER		WIND		BARO- METER (mbal)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS														
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																	
					24	S08	895	-100	-105	6	26														
MESSAGE TIME HR 1/10	CAST NO.	CARGO TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ σ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - at/l	NH ₃ -N µg - at/l	NO ₂ -N µg - at/l	NO ₃ -N µg - at/l	SiO ₄ -Si µg - at/l	pH	CO ₂								
		STD	0000	-0179	3414	2750	0005956	0000	14398	680															
189	OBS	0000		-0179	34136	2750			14398	680	207					090	814								
	STD	0010		-0183	3413	2749	0006002	0006	14397	680															
189	OBS	0010		-0183	34128	2749			14397	680	206					087	813								
	STD	0020		-0184	3413	2749	0006002	0012	14399	665															
189	OBS	0026		-0184	34126	2749			14399	656	206					086	815								
	STD	0030		-0180	3420	2755	0005443	0018	14403	649															
	STD	0050		-0166	3444	2774	0003625	0027	14416	625															
189	OBS	0052		-0165	34459	2776			14417	623	219					092	808								
	STD	0075		-0166	3449	2778	0003259	0035	14421	619															
189	OBS	0078		-0166	34489	2778			14422	618	222					092	808								
	STD	0100		-0165	3450	2779	000314*	0043	14426	618															
189	OBS	0104		-0163	34505	2779			14428	617	222					092									
	STD	0125		-0139	3453	2781	0002980	0051	14443	597															
	STD	0150		-0104	3456	2782	0002867	0058	14464	570															
189	OBS	0155		-0096	34563	2782			14468	564	234					099	805								
	STD	0200		-0008	3464	2784	0002692	0072	14517	498															
189	OBS	T0207		0002	34647	2784			14523	491	237					109	803								
	STD	0250		0009	3465	2784	0002692	0086	14534	493															
	STD	0300		0014	3466	2784	0002683	0099	14544	496															
189	OBS	0311		0015	34658	2784			14547	496	236					111	804								
	STD	0400		0015	3466	2784	0002665	0126	14561	480															
189	OBS	0415		0015	34664	2785			14564	478	236					115	798								
	STD	0500		0030	3467	2784	0002686	0153	14585	472															
189	OBS	T0519		0032	34676	2785			14589	471	240					118	802								
	STD	0600		0033	3468	2785	0002641	0179	14603	476															
189	OBS	T0624		0033	34680	2785			14607	477	236					120	795								
	STD	0700		0031	3468	2785	0002624	0206	14619	479															
	STD	0800		0027	3468	2785	0002598	0232	14634	481															
189	OBS	T0825		0026	34678	2785			14638	482	237					123	796								
	STD	0900		0023	3468	2785	0002592	0258	14649	483															
	STD	1000		0019	3468	2786	0002570	0283	14664	488															
189	OBS	T1027		0017	34675	2786			14667	490	238					123	800								
220	OBS	T1075		0014	34675	2786			14674	494	235					124	803								
	STD	1100		0013	3467	2785	0002566	0309	14678	495															
	STD	1200		0009	3467	2786	0002532	0335	14693	499															
	STD	1300		0005	3467	2786	0002496	0360	14708	503															
220	OBS	1329		0004	34667	2786			14712	504	240					114	801								
	STD	1400		0001	3467	2786	0002480	0385	14723	507															
	STD	1500		-0002	3467	2786	0002457	0409	14739	512															
220	OBS	1579		-0005	34666	2786			14751	516	240					123									
	STD	1750		-0009	3466	2786	0002393	0470	14778	528															
220	OBS	1891		-0013	34663	2786			14800	533	237					121	794								
	STD	2000		-0016	3466	2786	0002314	0529	14818	533															
220	OBS	2198		-0021	34662	2786			14849	532	238					116	794								
	STD	2500		-0026	3466	2787	0002185	0641	14899	544															
220	OBS	2508		-0026	34659	2786			14901	544	240					114	793								
220	OBS	2814		-0030	34656	2786			14952	547	242					125	792								
	STD	3000		-0031	3465	2786	0002115	0749	14984	549															
220	OBS	T3124		-0034	34653	2786			15004	553	231					120	780								
220	OBS	3437		-0052	34635	2786			15051	570	235					118	788								
220	OBS	T3490		-0062	34630	2786			15056	578	231					113	790								
220	OBS	T3515		-0065	34635	2786			15059	584	231					111	791								
220	OBS	3532		-0065	34653	2788	-		15062	583	227					103	782								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	OBS. INSTR.	MARSDEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10°	1°	MO	DAY	HR.1/10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA	TYPE		AMT		
318037		GL	681160	049021W		520	B9	02	29	030	1968		033		3512	30	00	01	X		X7	03		0042
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. UMI	DIR.	SPEED OR FORCE			DRY BULB	WET BULB											
						DT	SD	18	S06	918	-105	-114	6	41										
MESSAGE TIME OF HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t ?		Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₃ -N μg - at/l	NO ₂ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	1 C						
	041	STD	0000	-0188	3384	2726	0008227	0000	14389															
		OBS	0000	-0188	33838	2726			14389															
		STD	0010	-0189	3386	2727	0008064	0008	14391															
		OBS	0010	-0189	33858	2727			14391															
	005	STD	0020	-0188	3390	2731	0007752	0016	14393															
		OBS	0020	-0188	33898	2731			14393															
		OBS	0025	-0184	34158	2752			14400															
		STD	0030	-0180	3424	2758	0005113	0022	14404															
		OBS	0030	-0180	34243	2758			14404															
		OBS	0040	-0172	34289	2762			14410															
		STD	0050	-0172	3432	2765	0004507	0032	14412															
		OBS	0050	-0172	34323	2765			14412															
		STD	0075	-0163	3438	2769	0004087	0043	14421															
		OBS	0075	-0163	34379	2769			14421															
		STD	0100	-0143	3441	2771	0003912	0053	14435															
		OBS	0100	-0143	34408	2771			14435															
		STD	0125	-0103	3449	2776	000343	0062	14459															
		OBS	0125	-0103	34488	2776			14459															
		STD	0150	-0052	3454	2778	0003256	0070	14487															
		OBS	0150	-0052	34538	2778			14487															
		STD	0200	0004	3457	2778	0003304	0087	14522															
		OBS	0200	0004	34568	2778			14522															
		STD	0250	0010	3458	2778	0003252	0103	14533															
		OBS	0250	0010	34579	2778			14533															
		STD	0300	0017	3459	2779	0003208	0119	14545															
		OBS	0300	0017	34590	2779			14545															
		STD	0400	0024	3460	2779	000319	0151	14565															
		OBS	0400	0024	34598	2779			14565															
		STD	0500	0032	3461	2779	0003167	0183	14585															
		OBS	0500	0032	34608	2779			14585															
		STD	0600	0033	3461	2779	0003177	0215	14602															
		OBS	0600	0033	34608	2779			14602															
		STD	0700	0030	3461	2779	0003158	0246	14618															
		OBS	0700	0030	34608	2779			14618															
		STD	0800	0026	3461	2780	0003131	0278	14632															
		OBS	0800	0026	34608	2780			14632															
		STD	0900	0021	3461	2780	0003101	0309	14647															
		OBS	0900	0021	34607	2780			14647															
		STD	1000	0017	3460	2780	000310	0340	14662															
		OBS	1000	0017	34603	2780			14662															
		STD	1100	0014	3460	2780	0003074	0371	14677															
		OBS	1100	0014	34603	2780			14677															
		STD	1200	0010	3460	2780	0003062	0402	14692															
		OBS	1200	0010	34600	2780			14692															
		STD	1300	0006	3460	2780	000304	0432	14707															
		OBS	1300	0006	34598	2780			14707															
		STD	1400	0003	3460	2780	000301	0462	14723															
		OBS	1400	0003	34598	2780			14723															
		STD	1500	-0003	3460	2780	0002959	0492	14737															
		OBS	1500	-0003	34597	2780			14737															
		OBS	1600	-0006	34597	2780			14753															
		OBS	1700	-0009	34594	2780			14768															
		STD	1750	-0011	3459	2780	0002920	0566	14776															
		OBS	1800	-0013	34589	2780			14784															
		OBS	1900	-0015	34588	2780			14800															
		STD	2000	-0017	3459	2780	0002855	0638	14816															
		OBS	2000	-0017	34588	2780			14816															
		OBS	2100	-0020	34587	2780			14832															
		OBS	2200	-0022	34587	2780			14848															
		OBS	2300	-0024	34583	2780			14864															
		OBS	2400	-0025	34579	2780			14881															
		STD	2500	-0026	3457	2779	0002853	0781	14898															
		OBS	2500	-0026	34568	2779			14898															
		OBS	2600	-0028	34568	2779			14914															
		OBS	2700	-0029	34568	2779			14931															
		OBS	2800	-0030	34568	2779			14948															
		OBS	2900	-0032	34568	2779			14965															
		STD	3000	-0033	3457	2779	0002711	0920	14982															
		OBS	3000	-0033	34568	2779			14982															

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPT INCHES	MARS DEN SQUARE					YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	

WATER		WIND		BARO-	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mba)	DRY RULR	WET RULR			
		08	503	929	-075	-085	7	11	

MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₃ -N μg - at/l	NO ₃ -N μg - at/l	Si O ₂ -Si μg - at/l	pH	1 CIC
		STD	0000	-0145	3410	2746	0006288	0000	14413	698							
181		OBS	0000	-0145	34104	2746			14413	698	194				085	804	
		STD	0010	-0171	3410	2747	0006222	0006	14403	708							
181		OBS	0010	-0171	34103	2747			14403	708	202				086	804	
		STD	0020	-0179	3410	2747	0006205	0012	14400	724							
181		OBS	0025	-0180	34101	2747			14401	725	203				086	804	
		STD	0030	-0176	3419	2754	0005529	0018	14405	703							
		STD	0050	-0161	3445	2775	0003563	0027	14419	647							
181		OBS	0051	-0160	34457	2775			14420	645	212				089	801	
		STD	0075	-0158	3450	2779	0003174	0036	14425	648							
181		OBS	0076	-0158	34505	2779			14425	648	219				090	798	
		STD	0100	-0141	3452	2780	0003061	0044	14437	626							
181		OBS	0102	-0140	34523	2780			14438	624	219				093	797	
		STD	0125	-0135	3453	2780	0002993	0051	14445	613							
		STD	0150	-0118	3454	2781	0002967	0059	14457	598							
181		OBS	0153	-0115	34543	2781			14459	596	225				094	794	
		STD	0200	-0047	3461	2783	0002760	0073	14499	555							
181		OBS	0204	-0042	34610	2783			14502	552	226				098	794	
		STD	0250	-0006	3464	2784	0002730	0087	14527	514							
		STD	0300	0019	3466	2785	0002659	0100	14547	487							
181		OBS	0306	0021	34667	2785			14549	485	229				106	791	
		STD	0400	0024	3467	2785	0002645	0127	14566	485							
181		OBS	0409	0025	34674	2785			14568	485	230				108	790	
		STD	0500	0032	3468	2785	0002624	0153	14586	479							
181		OBS	0513	0033	34680	2785			14589	478	229				113	790	

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARS DEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAR. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA		TYPE
318037	GL	68253S	045501W	520	85	03	01	090	1968		035	3877	21	00	0	X		X1	7	7		0044
WATER					WIND			AIR TEMP. °C			VTL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
COLOR CODE	TRANS. m	DIR.	SPEED OF FORCE	BARO- METER (mb)	DRY RULE	WET RULE																
				06	S09	890	-055	-065	7	21												
MESSENGER TIME HR 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ D OTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	NH ₃ -N μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S					
		STD	0000	-0181	3402	2741	000682	0000	14395	712												
100		OBS	0000	-0181	34023	2741			14395	712	194				086	810						
		STD	0010	-0184	3403	2741	0006745	0007	14395	725												
100		OBS	0010	-0184	34031	2741			14395	725	193				086	812						
		STD	0020	-0185	3403	2741	0006745	0014	14397	740												
100		OBS	0026	-0185	34030	2741			14398	741	195				085	810						
		STD	0030	-0181	3411	2748	0006132	0020	14401	731												
		STD	0050	-0163	3441	2772	0003864	0030	14417	686												
100		OBS	0052	-0162	34436	2774			14418	682	213				088	805						
		STD	0075	-0158	3447	2776	0003404	0039	14425	651												
		STD	0100	-0147	3450	2778	0003195	0047	14434	621												
100		OBS	0103	-0145	34501	2778			14436	618	218				092	803						
		STD	0125	-0130	3454	2781	0002934	0055	14447	599												
		STD	0150	-0104	3458	2783	0002715	0062	14464	575												
100		OBS	0155	-0097	3494Q	2812Q			570	223					097	800						
		STD	0200	-0010	3463	2783	0002757	0076	14516	517												
100		OBS	0207	-0002	34639	2784			14521	512	227				106	797						
		STD	0250	0009	3466	2784	0002670	0089	14534	496												
100		OBS	0259	0011	34658	2784			14536	494	228				106	798						
		STD	0300	0017	3466	2784	0002685	0103	14546	489												
100		OBS	0313	0019	34659	2784			14549	487	231				110	797						
		STD	0400	0025	3466	2784	0002727	0130	14566	479												
100		OBS	0413	0026	3469Q	2786Q			478	235					112	796						
		STD	0500	0029	3467	2784	0002682	0157	14585	474												
100		OBS	0518	0030	34674	2785			14588	473	232				113	794						
		STD	0600	0029	3468	2785	0002609	0183	14601	475												
100		OBS	0617	0029	34684	2786			14604	476	234				118	795						
		STD	0700	0026	3469	2786	0002551	0209	14617	481												
100		OBS	0719	0025	34685	2786			14620	482	233				120	796						
		STD	0800	0024	3468	2786	0002570	0235	14633	480												
100		OBS	0820	0024	34680	2786			14636	480	226				119	794						
		STD	0900	0022	3468	2786	0002562	0260	14648	482												
		STD	1000	0019	3468	2786	000254	0286	14664	485												
100		OBS	T1020	0018	34678	2786			14667	485	231				120	794						
		STD	1100	0015	3468	2786	0002538	0311	14679	486												
038		OBS	T1154	0013	34674	2786			14687	487	232				121	792						
		STD	1200	0013	3467	2786	0002535	0337	14695	485												
038		OBS	T1262	0009	34674	2786			14703	482	247				116	790						
100		OBS	T1273	0008	34666	2785			14705	500	242				122	793						
		STD	1300	0007	3467	2785	0002543	0362	14709	497												
		STD	1400	0003	3467	2786	0002505	0387	14724	488												
038		OBS	1460	0001	3468Q	2787Q			487	255					119	790						
		STD	1500	-0000	3467	2786	0002473	0412	14739	493												
		STD	1750	-0008	3467	2786	0002391	0473	14779	520												
038		OBS	1763	-0008	34666	2786			14781	521	243				122	792						
		STD	2000	-0015	3466	2786	0002331	0532	14818	530												
038		OBS	2066	-0017	34661	2786			14828	530	251				123	786						

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPT INCH	MARSDEN SQUARE		STATION TIME GMT		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MD	DAY HR, 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYL	AMT	

WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. COOL	ND. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLDER CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB			
		06	506	885	-043	-053	7	16	

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH m	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-107	$\Sigma \Delta D$ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PD ₄ -P µg - at/l	NN ₃ -N µg - at/l	NO ₂ -N µg - at/l	ND ₃ -N µg - at/l	SiO ₄ -Si µg - at/l	pH	S C
		STO	0000	-0181	3402	2741	0006828	0000	14395	716							
161		OBS	0000	-0181	34022	2741			14395	716	117				086	815	
		STO	0010	-0183	3402	2741	0006809	0007	14396	721					084	816	
161		OBS	0010	-0183	34023	2741			14396	721	194						
		STO	0020	-0184	3402	2741	0006807	0014	14397	722					083	816	
161		OBS	0026	-0185	34022	2741			14397	722	122						
		STO	0030	-0180	3412	2748	0006057	0020	14402	708							
		STO	0050	-0163	3444	2774	0003634	0030	14418	659					087	805	
161		OBS	0051	-0162	34454	2775			14419	658	201						
		STO	0075	-0158	3448	2777	0003328	0038	14425	656					089	811	
161		OBS	0077	-0157	34481	2777			14426	655	210						
		STO	0100	-0146	3450	2778	0003198	0047	14435	625					089	811	
161		OBS	0103	-0144	34505	2779			14436	621	213						
		STO	0125	-0118	3453	2780	0003053	0054	14453	594							
		STO	0150	-0087	3456	2781	0002936	0062	14472	564							
161		OBS	0154	-0082	34565	2781			14475	560	228				096	808	
		STO	0200	-0018	3463	2784	0002715	0076	14513	511							
161		OBS	T0207	-0010	34638	2784			14518	506	228				101	805	
		STO	0250	0003	3466	2785	0002598	0089	14531	493							
		STO	0300	0015	3467	2785	0002590	0102	14545	483							
165		OBS	0305		34671				482	231					107	802	
		STO	0400	0030	3468	2785	0002630	0128	14568	477							
165		OBS	0410	0031	34678	2785			14571	476	231				108	802	
		STO	0500	0032	3468	2785	0002624	0155	14586	474							
165		OBS	T0511	0032	34683	2785			14588	474	232				110	800	
		STO	0600	0028	3468	2786	0002584	0181	14601	480							
165		OBS	0616	0027	34682	2786			14603	481	235				113	801	
		STO	0700	0027	3468	2785	0002588	0207	14617	483							
165		OBS	T0723	0027	34681	2785			14621	483	233				113	799	
		STO	0800	0025	3468	2786	0002583	0232	14633	484							
165		OBS	T0822	0024	34679	2785			14636	485	242				117	800	
		STO	0900	0022	3468	2785	0002585	0258	14648	488							
165		OBS	T0925	0021	34676	2785			14652	489	237				118	802	
		STO	1000	0018	3468	2786	0002554	0284	14663	489							
165		OBS	T1024	0017	34677	2786			14667	489	239				118	798	

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	WIND INDIC	MARSDEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NO. OF STATION NUMBER																												
CTRY CODE	ID. NO.						10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR	HGT	PER		SEA	TYPE		AMT																											
31	8037	GL	69016S	046002W		520	96	03	01	172	1968	036		3884	36	00	0	X		X1	0	3	0046																												
		MESSAGE TIME NR 1/10	CAST NO.	CARD TYPE	DEPTH m	T °C	S %	SIGMA-T	WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																		
COLOR CODE	TRANS. (m)								DIR.	SPEED OR FORCE	BARO- METER (mb)			DRY RULR	WET RULR											VIS CODE																									
DT	SD	07	S15	915	-073	-080	7	51																																											
		PO ₄ -P µg - ml/l	NH ₃ -N µg - ml/l	NO ₂ -N µg - ml/l	NO ₃ -N µg - ml/l	SiO ₄ -Si µg - ml/l	pH	S CODE																																											
180	STD	0000																																																	
	OBS	0000																																																	
	STD	0010																																																	
	OBS	0010																																																	
	STD	0020																																																	
	OBS	0020																																																	
	OBS	0023																																																	
	OBS	0025																																																	
	STD	0030																																																	
	OBS	0030																																																	
	OBS	0040																																																	
	STD	0050																																																	
	OBS	0050																																																	
	OBS	0056																																																	
	OBS	0065																																																	
	OBS	0072																																																	
	STD	0075																																																	
	OBS	0075																																																	
	STD	0100																																																	
	OBS	0100																																																	
	STD	0125																																																	
	OBS	0125																																																	
	STD	0150																																																	
	OBS	0150																																																	
	STD	0200																																																	
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	STD	0250																																																	
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	STD	1000																																																	
	OBS	1000																																																	
	STD	1100																																																	
	OBS	1100																																																	
	STD	1200																																																	
	OBS	1200																																																	
	STD	1300																																																	
	OBS	1300																																																	
	STD	1400																																																	
	OBS	1400																																																	
	STD	1500																																																	
	OBS	1500																																																	
	OBS	1600																																																	
	OBS	1700																																																	
	STD	1750																																																	
	OBS	1800																																																	
	OBS	1900																																																	
	STD	2000																																																	
	OBS	2000																																																	
	OBS	2100																																																	
	OBS	2200																																																	
	OBS	2300																																																	
	OBS	2400																																																	
	STD	2500																																																	
	OBS	2500																																																	
	OBS	2600																																																	
	OBS	2700																																																	
	OBS	2800																																																	
	OBS	2900																																																	
	STD	3000																																																	
	OBS	3000																																																	
	OBS	3100																																																	
	OBS	3200																																																	
	OBS	3300																																																	
	OBS	3400																																																	
	OBS	3500																																																	
	OBS	3600																																																	

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REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INDIC	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER		
CITY CODE	ID. NO.					10"	1'	MO	DAY		HR. 1/10	CRUISE NO.			STATION NUMBER	DIR.	NGT		PER	SEA		TYPE	AMT
318037		GL	69412S	046163W		520	96	03	02 050	1968		037	3857	39	00	0	X		X1	6	7	0047	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. INT.	DIR.	SPEED OR FORCE	mbal	DRY BULB	WET BULB											
								11	505	873	-025	-036	7					29					
MESSAGE TIME HR 1/10	CAST NO.	CARGO TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ ρ DYN. M. X 10 ³		SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₄ ⁺ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	STATION NUMBER			
		STD	0000	-0179	3411	2748		0006164		0000		14397	689										
	074	OBS	0000	-0179	34109	2748						14397	689	210					086	811			
		STD	0010	-0184	3410	2747		0006192		0006		14396	693										
	074	OBS	0010	-0184	34103	2747						14396	693	203					086	811			
		STD	0020	-0185	3410	2747		0006199		0012		14398	697										
	074	OBS	0026	-0185	34100	2747						14399	700	210					084	812			
		STD	0030	-0181	3417	2753		0005671		0018		14402	687										
		STD	0050	-0165	3444	2774		0003628		0028		14417	634										
	074	OBS	0052	-0164	34461	2776						14418	630	220					087	806			
		STD	0075	-0153	3448	2777		0003342		0036		14427	620										
		STD	0100	-0138	3450	2778		0003224		0045		14439	606										
	074	OBS	0103	-0136	34502	2778						14440	604	222					092	805			
		STD	0125	-0121	3452	2779		0003119		0052		14451	590										
		STD	0150	-0097	3455	2781		0002971		0060		14467	570										
	074	OBS	0154	-0092	34556	2781						14470	567	229					094	804			
		STD	0200	-0023	3462	2783		0002765		0074		14510	518										
	074	OBS	T0205	-0018	34622	2783						14513	514	230					100	800			
		STD	0250	0009	3465	2784		0002738		0088		14534	491										
	074	OBS	0257	0012	34650	2784						14536	489	238					103	798			
		STD	0300	0019	3466	2784		0002690		0102		14547	483										
	074	OBS	T0309	0020	34661	2784						14549	482	237					106	797			
		STD	0400	0029	3467	2784		0002707		0129		14568	479										
	074	OBS	0411	0030	34667	2784						14570	478	238					108	797			
		STD	0500	0030	3467	2784		0002686		0156		14585	472										
	074	OBS	T0512	0030	34672	2785						14587	471	238					110	799			
		STD	0600	0029	3467	2785		0002653		0182		14601	475										
	074	OBS	0614	0029	34674	2785						14604	476	240					113	796			
		STD	0700	0028	3468	2785		0002633		0209		14618	477										
	074	OBS	T0719	0027	34677	2785						14620	478	249					115	797			
		STD	0800	0023	3467	2785		0002617		0235		14632	484										
	074	OBS	T0810	0023	34674	2785						14634	485	228					116	796			
		STD	0900	0020	3467	2785		0002599		0261		14647	488										
		STD	1000	0017	3467	2785		000258		0287		14663	491										
	074	OBS	T1018	0016	34672	2785						14665	491	247					119	795			
	016	OBS	T1036	0016	34680	2786Q							487	254					118	801			
		STD	1100	0014	3467	2786		0002552		0313		14678	493										
	016	OBS	T1140	0012	34674	2786						14684	496	270					119	801			
		STD	1200	0010	3467	2786		0002540		0338		14693	497										
		STD	1300	0006	3467	2786		0002504		0363		14708	499										
	016	OBS	1344	0005	34669	2786						14715	500	252					119	800			
		STD	1400	0004	3467	2786		0002499		0388		14724	502										
		STD	1500	0001	3467	2786		0002476		0413		14740	506										
	016	OBS	1650	-0004	34665	2786						14763	512	256					118	802			
		STD	1750	-0008	3466	2786		0002402		0474		14778	518										
	016	OBS	1956	-0015	34661	2786						14810	528	252					118	800			
		STD	2000	-0016	3466	2786		0002336		0533		14818	529										
	016	OBS	T2262	-0021	34658	2786						14860	537	252					118	798			
		STD	2500	-0022	3466	2786		0002250		0648		14901	538										
	016	OBS	2567Q	-0025	34658	2786							541	251					118	797			
	016	OBS	2872Q	-0028	34656	2786							539	252					117	795			
		STD	3000	-0026	3465	2786		0002182		0759		14986	544										
	039	OBS	T3185	-0029	34652	2786						15017	548	256					115	796			
	039	OBS	3491	-0035	34649	2786						15068	557	252					115	794			
	039	OBS	3773	-0047	34636	2786						15113	569	240					111	792			
	039	OBS	3798	-0049	34637	2786						15116	575	251					109	790			
	039	OBS	T3817	-0053	34637	2786						15118	779Q	226					107	791			
	039	OBS	T3855	-0062	34645	2787						15121	580	222					097	797			

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	WIND INDIC	MARSON SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER	
CTRY CODE	ID. NO.					10°	1°	MO	DAY	HR.1/10	CRUISE NO.		STATION NUMBER	DIR			HGT	PER	SEA	TYPE		AMT			
318037		GL	69412S	046163W		520	96	03	02	090	1968		037		3777	20	00	10	X		X1	0	3	0048	
		WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS													
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE			DRY BULB	WET BULB	VIS. CODE															
		DT	SD	11	S05	865	-021	-025	7	32															
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	NH ₄ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	pH	CTSS								
		STD	0000	-0185	3410	2747	0006219	0000	14394																
095		OBS	0000	-0185	34100	2747			14394																
		STD	0010	-0185	3410	2747	0006213	0006	14396																
		OBS	0010	-0185	34100	2747			14396																
006		OBS	0016	-0185	34100	2747			14397																
		STD	0020	-0175	3435	2767	0004317	0011	14406																
		OBS	0020	-0175	34349	2767			14406																
		OBS	0025	-0163	34450	2775			14414																
		STD	0030	-0164	3446	2776	0003488	0015	14414																
		OBS	0030	-0164	34460	2776			14414																
		OBS	0040	-0166	34467	2776			14415																
		STD	0050	-0160	3449	2778	0003258	0022	14420																
		OBS	0050	-0160	34490	2778			14420																
		STD	0075	-0142	3451	2779	0003147	0030	14433																
		OBS	0075	-0142	34510	2779			14433																
		STD	0100	-0128	3453	2780	0003028	0038	14444																
		OBS	0100	-0128	34530	2780			14444																
		STD	0125	-0100	3456	2782	0002892	0045	14461																
		OBS	0125	-0100	34560	2782			14461																
		STD	0150	-0050	3460	2783	0002793	0052	14489																
		OBS	0150	-0050	34600	2783			14489																
		STD	0200	0000	3465	2785	0002652	0066	14521																
		OBS	0200	0000	34651	2785			14521																
		STD	0250	0016	3466	2784	000271	0079	14537																
		OBS	0250	0016	34655	2784			14537																
		STD	0300	0021	3466	2784	0002701	0093	14548																
		OBS	0300	0021	34660	2784			14548																
		STD	0400	0029	3467	2784	0002677	0120	14568																
		OBS	0400	0029	34670	2784			14568																
		STD	0500	0031	3467	2785	0002678	0147	14586																
		OBS	0500	0031	34672	2785			14586																
		STD	0600	0028	3467	2785	0002661	0173	14601																
		OBS	0600	0028	34672	2785			14601																
		STD	0700	0026	3467	2785	0002649	0200	14617																
		OBS	0700	0026	34672	2785			14617																
		STD	0800	0023	3467	2785	0002629	0226	14632																
		OBS	0800	0023	34672	2785			14632																
		STD	0900	0017	3467	2785	0002584	0252	14646																
		OBS	0900	0017	34672	2785			14646																
		STD	1000	0016	3467	2785	000259	0278	14662																
		OBS	1000	0016	34670	2785			14662																
		STD	1100	0013	3467	2785	0002566	0304	14678																
		OBS	1100	0013	34670	2785			14678																
		STD	1200	0009	3467	2786	0002532	0329	14693																
		OBS	1200	0009	34670	2786			14693																
		STD	1300	0004	3467	2786	0002488	0355	14708																
		OBS	1300	0004	34670	2786			14708																
		STD	1400	0001	3467	2786	0002458	0379	14723																
		OBS	1400	0001	34670	2786			14723																
		STD	1500	-0003	3467	2786	0002426	0404	14738																
		OBS	1500	-0003	34669	2786			14738																
		OBS	1600	-0006	34668	2786			14754																
		OBS	1700	-0008	34667	2786			14770																
		STD	1750	-0010	3466	2786	0002384	0464	14778																
		OBS	1800	-0012	34660	2786			14785																
		OBS	1900	-0014	34660	2786			14801																
		STD	2000	-0015	3466	2786	0002346	0523	14818																
		OBS	2000	-0015	34660	2786			14818																

REFERENCE CIRCT CODE	SHIP NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DATE 1/10	MARSOEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S				WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
						10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER		DIR.	HGT	PER	SEA	DIR.	HGT	PER	SEA		TYPE	AMT		
						WATER		WIND		BARO- METER (mba)		AIR TEMP. °C			VIS CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS. mm	DIR.	SPEED OR FORCE	DRY BULB	WET BULB																						
318037		GL	700985	043419W	556	03	03	02	180	1968		038		3713	10	00	0	X					X7	4	8		0049
									14	S18	855	-024	-030	6	15												
MESSNGR TIME OF HR 1/10	CAST NO.	CARGO TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{10}^s	$\Sigma \Delta$ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{at/l}$	NH ₃ -N $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S CODE										
		STD	0000	-0177	3390	2731	0007767	0000	14395	780																	
169		OBS	0000	-0177	33901	2731			14395	780	186					087	810										
		STD	0010	-0179	3390	2731	0007771	0008	14396	800																	
169		OBS	0010	-0179	33899	2731			14396	800	193					086	813										
		STD	0020	-0158	3432	2764	0004584	0014	14413	733																	
169		OBS	0025	-0152	34463	2776			14419	707	204					089	812										
		STD	0030	-0156	3447	2776	0003435	0018	14418	697																	
		STD	0050	-0169	3448	2777	000331	0025	14415	663																	
169		OBS	0051	-0170	34484	2778			14415	662	214					092	805										
		STD	0075	-0171	3449	2778	0003215	0033	14419	632																	
169		OBS	0077	-0171	34493	2778			14419	630	223					092	803										
		STD	0100	-0162	3451	2779	0003096	0041	14427	611																	
169		OBS	0103	-0161	34509	2780			14428	609	229					095	804										
		STD	0125	-0150	3452	2780	000302	0048	14437	606																	
		STD	0150	-0129	3454	2781	0002927	0056	14452	594																	
169		OBS	T0155	-0123	34542	2781			14455	590	226					092	801										
		STD	0200	-0051	3460	2783	0002779	0070	14497	537																	
169		OBS	0206	-0043	34606	2783			14502	532	233					096	799										
		STD	0250	-0016	3463	2784	0002721	0084	14522	515																	
		STD	0300	0005	3465	2784	0002683	0097	14540	500																	
169		OBS	T0311	0009	34654	2784			14544	498	238					102	796										
		STD	0400	0019	3466	2784	000269	0124	14563	490																	
169		OBS	0412	0020	34664	2784			14566	489	237					106	794										
		STD	0500	0026	3467	2785	000266	0151	14583	483																	
169		OBS	T0518	0027	34673	2785			14587	482	240					107	792										
		STD	0600	0025	3467	2785	0002642	0177	14600	482																	
169		OBS	0615	0025	34672	2785			14602	482	241					113	792										
		STD	0700	0024	3467	2785	0002636	0204	14616	486																	
169		OBS	T0717	0024	34672	2785			14619	487	237					113	796										
		STD	0800	0020	3467	2785	0002607	0230	14631	489																	
169		OBS	0818	0019	34672	2785			14633	490	240					116	795										
		STD	0900	0015	3467	2785	0002584	0256	14645	493																	
		STD	1000	0011	3467	2785	0002552	0282	14660	496																	
169		OBS	T1015	0010	34666	2785			14662	497	243					111	797										

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARS SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					MO		DAY			CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
						10"	1"	MO	DAY	HR.1/10												
318	037	GL	710935	043437W	556	13	03	03	060	1968	039		3365	20	00	0	X		X1	03		0050
		WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB														
		DT	SD	Z1	S06	868	-036	-042	7	34												
MESSENGR TIME OF HR. 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \sigma$ OBS. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - dl/l$	NH ₃ -N $\mu g - dl/l$	NO ₂ -N $\mu g - dl/l$	NO ₃ -N $\mu g - dl/l$	SiO ₄ -Si $\mu g - dl/l$	pH	S					
		STD	0000	-0184	3390	2731	0007767	0000	14392													
070		OBS	0000	-0184	33899	2731			14392													
		STD	0010	-0184	3391	2732	0007644	0008	14394													
		OBS	0010	-0184	33914	2732			14394													
004		OBS	0017	-0184	33917	2732			14395													
		STD	0020	-0154	3443	2773	0003759	0013	14417													
		OBS	0020	-0154	34429	2773			14417													
		OBS	0025	-0170	34460	2776			14411													
		STD	0030	-0173	3447	2777	0003396	0017	14410													
		OBS	0030	-0173	34469	2777			14410													
		OBS	0040	-0176	34490	2778			14411													
		STD	0050	-0177	3450	2779	0003144	0024	14412													
		OBS	0050	-0177	34499	2779			14412													
		STD	0075	-0172	3452	2781	0002997	0031	14419													
		OBS	0075	-0172	34518	2781			14419													
		STD	0100	-0154	3453	2781	0002951	0039	14431													
		OBS	0100	-0154	34529	2781			14431													
		OBS	0112	-0141	34549	2782			14440													
		OBS	0121	-0148	34527	2781			14438													
		STD	0125	-0136	3453	2780	0002998	0046	14444													
		OBS	0125	-0136	34529	2780			14444													
		STD	0150	-0087	3463	2787	0002409	0053	14473													
		OBS	0150	-0087	34629	2787			14473													
		STD	0200	-0021	3467	2787	0002403	0065	14512													
		OBS	0200	-0021	34669	2787			14512													
		STD	0250	0004	3465	2784	0002687	0078	14531													
		OBS	0250	0004	34649	2784			14531													
		STD	0300	0003	3464	2784	0002717	0091	14539													
		OBS	0300	0003	34644	2784			14539													
		STD	0400	0016	3466	2785	0002656	0118	14562													
		OBS	0400	0016	34662	2785			14562													
		STD	0500	0022	3467	2785	0002641	0144	14581													
		OBS	0500	0022	34669	2785			14581													
		STD	0600	0023	3467	2785	0002649	0171	14599													
		OBS	0600	0023	34669	2785			14599													
		STD	0700	0021	3467	2785	0002636	0197	14614													
		OBS	0700	0021	34669	2785			14614													
		STD	0800	0016	3467	2785	0002600	0223	14629													
		OBS	0800	0016	34669	2785			14629													
		STD	0900	0016	3467	2785	0002599	0249	14646													
		OBS	0900	0016	34669	2785			14646													
		STD	1000	0013	3467	2785	0002575	0275	14661													
		OBS	1000	0013	34669	2785			14661													
		STD	1100	0007	3467	2786	0002526	0301	14675													
		OBS	1100	0007	34669	2786			14675													
		STD	1200	0005	3467	2786	0002507	0326	14691													
		OBS	1200	0005	34669	2786			14691													
		STD	1300	0000	3467	2786	0002462	0351	14706													
		OBS	1300	0000	34669	2786			14706													
		STD	1400	-0004	3467	2786	0002452	0375	14721													
		OBS	1400	-0004	34665	2786			14721													
		STD	1500	-0007	3466	2786	0002428	0400	14736													
		OBS	1500	-0007	34664	2786			14736													
		OBS	1600	-0010	34662	2786			14752													
		OBS	1700	-0013	34660	2786			14768													
		STD	1750	-0014	3466	2786	0002376	0460	14776													
		OBS	1800	-0015	34659	2786			14784													
		OBS	1900	-0017	34659	2786			14800													
		STD	2000	-0019	3466	2786	0002314	0519	14816													
		OBS	2000	-0019	34659	2786			14816													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	OBT INDIC	MARSON SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER			
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT		
31	8037	GL	71093S	043437W		556	13	03	03	060	1968		039		3437	34	00	0	X		X1	6	7		0051
						WATER		WIND		BARO- METER (mba)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE			DRY BULB	WET BULB																
								21	506	868	-036	-042	7	29											
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - at/l	NH ₃ -N µg - at/l	NO ₂ -N µg - at/l	NO ₃ -N µg - at/l	SiO ₄ -Si µg - at/l	pH	S C								
		STD	0000	-0180	3391	2731	0007714	0000	14394	776															
061		OBS	0000	-0180	33907	2731			14394	776	197				086	808									
		STD	0010	-0181	3390	2731	0007728	0008	14395	782															
061		OBS	0010	-0181	33904	2731			14395	782	195				086	808									
		STD	0020	-0181	3391	2732	0007667	0015	14397	796															
061		OBS	0026	-0181	33915	2732			14398	805	196				086	808									
		STD	0030	-0179	3403	2741	000675*	0023	14401	780															
		STD	0050	-0173	3446	2776	0003453	0033	14413	685															
061		OBS	0052	-0172	34488	2778			14414	678	212				088	805									
		STD	0075	-0169	3450	2779	0003143	0041	14420	672															
		STD	0100	-0166	3451	2780	0003063	0049	14426	658															
061		OBS	0104	-0165	34516	2780			14427	655	218				090	804									
		STD	0125	-0150	3452	2780	000302	0056	14437	626															
		STD	0150	-0125	3454	2781	0002941	0064	14454	604															
061		OBS	0156	-0118	34544	2781			14458	600	219				094	801									
		STD	0200	-0048	3460	2783	0002793	0078	14498	598															
061		OBS	T0205	-0042	34605	2783			14502	598	230				102	800									
		STD	0250	-0001	3464	2784	0002727	0092	14529	519															
061		OBS	0259	0004	34643	2784			14533	510	231				103	797									
		STD	0300	0005	3465	2784	0002712	0106	14540	504															
061		OBS	T0312	0005	34647	2784			14542	502	235				102	798									
		STD	0400	0015	3466	2784	0002680	0133	14561	492															
061		OBS	0413	0016	34660	2784			14564	491	234				102	796									
		STD	0500	0021	3467	2785	0002657	0159	14581	480															
061		OBS	T0514	0022	34667	2785			14584	479	235				113	797									
		STD	0600	0023	3467	2785	0002648	0186	14598	484															
061		OBS	0615	0023	34669	2785			14601	485	236				114	796									
		STD	0700	0025	3467	2785	0002655	0212	14616	488															
061		OBS	0715	0025	34674	2785			14619	489	237						794								
		STD	0800	0023	3467	2785	0002617	0239	14632	480															
061		OBS	0815	0022	34673	2785			14634	479	236				114	794									
		STD	0900	0022	3467	2785	0002637	0265	14648	482															
028		OBS	T0987	0016					485	242					113	793									
		STD	1000	0014	3467	2785	0002576	0291	14661	487															
061		OBS	T1015	0013	34669	2785			14664	489	242				113	792									
028		OBS	T1087	0012	34666	2785			14675	497	246				118	796									
		STD	1100	0011	3467	2785	000258	0317	14677	497															
		STD	1200	0007	3466	2785	0002560	0342	14692	500															
028		OBS	1289	0003	34663	2785			14705	502	251				120	791									
		STD	1300	0003	3466	2785	0002531	0368	14707	502															
		STD	1400	-0001	3466	2785	000250	0393	14722	505															
		STD	1500	-0004	3466	2786	0002476	0418	14738	508															
028		OBS	1593	-0007	34660	2786			14752	510	248				120	794									
		STD	1750	-0012	3466	2786	0002395	0479	14777	517															
028		OBS	1896	-0016	34659	2786			14800	523	254				120	793									
		STD	2000	-0019	3466	2786	0002314	0538	14816	526															
028		OBS	2199	-0022	34658	2786			14849	532	255				121	793									
		STD	2500	-0024	3465	2786	0002250	0652	14900	541															
028		OBS	2505	-0024	34654	2786			14901	541	254				121	789									
028		OBS	2811	-0029	34654	2786			14952	548	255				113	796									
		STD	3000	-0031	3465	2786	0002144	0762	14984	558															
028		OBS	3119	-0035	34648	2786			15003	562	258				115	797									
028		OBS	3325	-0046	34641	2786			15034	564	253				113	795									
028		OBS	3350	-0051	34636	2786			15036	571	253				103	794									
028		OBS	T3375	-0053	34643	2786			15040	582	251				102	794									
028		OBS	T3402	-0064	34641	2787			15039	589	248				103	798									
028		OBS	T3428	-0074	34639	2787			15039	596	248				102	798									

REFERENCE	SHIP	LATITUDE	LONGITUDE	DEPT	MARSOEN		STATION TIME				YEAR	ORIGINATOR'S		DEPTH	MAX. DEPTH	WAVE			WEA-	CLOUD		NOCC			
					10"	1"	MO	DAY	HR.	1/10		CRUISE	STATION			DIR.	HGT	PER		SEA	TYPE		AMT		
318037	GL	714765	040413W	556	10	03	03	180	1968		040		3371	10	00	01X			X1	6	7	0052			
					WATER		WIND		BARO-		AIR TEMP. °C		VIS.		NO. OBS.		SPECIAL								
					COLOR		TRANS.		SPEED		DRY		WET		CODE		OBSERVATIONS								
					CODE		M		OR		RUL		RUL												
							20		S06		885		-045		-051		7		15						
MESSAGE	CARD	CARD	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME	Σ Δ σ	SOUND	O ₂ ml/l	PO ₄ -P	NH ₃ -N	NO ₂ -N	NO ₃ -N	SiO ₄ -S	pH	3								
TIME	NO.	TYPE					ANOMALY-310°	DYN. M.	VELOCITY		μg - 01/l	μg - 01/l	μg - 01/l	μg - 01/l	μg - 01/l		CC								
HR 1/10								x 10 ³																	
		STD	0000	-0179	3358	2704	0010253	0000	14390	806															
170		OBS	0000	-0179	33577	2704			14390	806	182														
		STD	0010	-0179	3357	2704	0010292	0010	14391	811						072	814								
170		OBS	0010	-0179	33571	2704			14391	811	231														
		STD	0020	-0148	3398	2736	0007220	0019	14413	791						071	814								
170		OBS	0026	-0138	34164	2751			14422	777	200														
		STD	0030	-0143	3423	2756	0005311	0025	14421	764						076	803								
		STD	0050	-0160	3447	2776	0003412	0034	14420	712															
170		OBS	0052	-0161	34484	2777			14420	708	212					081	797								
		STD	0075	-0162	3450	2779	0003163	0042	14423	678															
170		OBS	0077	-0162	34502	2779			14424	675	225					082	805								
		STD	0100	-0144	3451	2779	0003128	0050	14436	629															
170		OBS	0103	-0142	34514	2779			14437	625	220					083	803								
		STD	0125	-0140	3452	2780	0003047	0058	14442	625															
		STD	0150	-0137	3453	2780	0002992	0065	14448	624															
170		OBS	T0156	-0136	34530	2780			14449	624	227					083	791								
		STD	0200	-0067	3458	2782	0002856	0080	14489	622															
170		OBS	0206	-0059	34585	2782			14494	620	278					093	788								
		STD	0250	-0026	3461	2783	0002820	0094	14517	560															
		STD	0300	0002	3464	2784	000274*	0108	14539	513															
170		OBS	T0313	0007	34643	2784			14543	505	282					102	788								
		STD	0400	0023	3466	2784	000273	0135	14565	495															
170		OBS	0411	0024	34660	2784			14567	494	239					104	787								
		STD	0500	0024	3466	2784	0002692	0163	14582	491															
170		OBS	T0514	0024	34665	2784			14585	491	231					107	781								
		STD	0600	0025	3467	2785	0002669	0189	14599	488															
170		OBS	0614	0025	34669	2785			14602	487	236					108	789								
		STD	0700	0032	3468	2785	0002652	0216	14619	484															
170		OBS	T0717	0033	34678	2785			14623	483	236					114	777								
		STD	0800	0028	3468	2785	0002635	0242	14634	485															
170		OBS	0816	0027	34676	2785			14637	485	234					115	781								
		STD	0900	0023	3467	2785	0002645	0269	14649	486															
		STD	1000	0020	3467	2785	0002622	0295	14664	487															
170		OBS	T1018	0020	34664	2784			14667	487	238					115	782								

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DATE DD MON	MARS DEN		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- TH ER CODE	CLOUD CODES		NDDC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MD	DAY		HR.	1/10			CRUISE NO.	STATION NUMBER	DIR.	HGT		PER	SEA	
31	8037	GL	711185	039017W	555 19	03	04	060	1968		041	3813	20	00	0	X		X1	0	3		0053

31	8037	GL	71118S	039017W	555	19	03	04	060	1968	041	3813	20	00	0	X		X1	0	3	0053
					WATER		WIND		AIR TEMP. °C		VIB. CODE		SPECIAL								
					COLOR	TRANS.	DIR.	SPEED	METER	DRY	WET	ND.	ND.	ND.							
					CODE	(m)		OR	(mb)	BULB	BULB	CODE	CODE	CODE							
					DT	SD	00	500	921	-031	-033	7	30								

MESSAGE	CARD	CARD	DEPTH	T °C	S %	SIGMA-T	SPECIFIC VOLUME	Σ Δ D	SOUND	O ₂ ml/l	PD ₁ -P	NH ₃ -N	NO ₂ -N	NO ₃ -N	SiO ₄ -Si	pH	S
TIME	NO.	TYPE	(m)				ANOMALY-σ _T	DYN. M.	VELOCITY		μg - ml/l	μg - ml/l	μg - ml/l	μg - ml/l	μg - ml/l		C/C
HR 1/10								x 10 ³									
		STD	0000	-0185	3353	2700	001064	0000	14386								
	062	OBS	0000	-0185	33525	2700			14386								
		STD	0010	-0177	3363	2708	000988	0010	14393								
		OBS	0010	-0177	33625	2708			14393								
		STD	0020	-0142	3445	2774	0003671	0017	14423								
	002	OBS	0020	-0142	34445	2774			14423								
		OBS	0025	-0160	34455	2775			14415								
		STD	0030	-0166	3447	2776	0003445	0021	14413								
		OBS	0030	-0166	34465	2776			14413								
		STD	0050	-0179	3450	2779	0003131	0027	14411								
		OBS	0050	-0179	34500	2779			14411								
		STD	0075	-0175	3454	2782	0002858	0035	14418								
		OBS	0075	-0175	34535	2782			14418								
		STD	0100	-0160	3454	2782	0002849	0042	14429								
		OBS	0100	-0160	34540	2782			14429								
		STD	0125	-0132	3457	2783	0002736	0049	14446								
		OBS	0125	-0132	34565	2783			14446								
		STD	0150	-0100	3459	2784	0002692	0056	14466								
		OBS	0150	-0100	34585	2784			14466								
		STD	0200	-0037	3468	2788	0002276	0068	14505								
		OBS	0200	-0037	34675	2788			14505								
		STD	0250	-0010	3464	2784	0002647	0080	14525								
		OBS	0250	-0010	34644	2784			14525								
		STD	0300	-0009	3464	2784	0002649	0094	14534								
		OBS	0300	-0009	34644	2784			14534								
		STD	0400	0012	3467	2785	0002601	0120	14560								
		OBS	0400	0012	34666	2785			14560								
		STD	0500	0021	3467	2785	0002657	0146	14581								
		OBS	0500	0021	34666	2785			14581								
		STD	0600	0020	3467	2785	0002644	0173	14597								
		OBS	0600	0020	34667	2785			14597								
		STD	0700	0019	3467	2785	0002599	0199	14613								
		OBS	0700	0019	34672	2785			14613								
		STD	0800	0016	3467	2785	0002570	0225	14629								
		OBS	0800	0016	34673	2785			14629								
		STD	0900	0013	3467	2785	0002592	0250	14644								
		OBS	0900	0013	34667	2785			14644								
		STD	1000	0008	3467	2785	0002559	0276	14659								
		OBS	1000	0008	34666	2785			14659								
		STD	1100	0004	3467	2785	0002532	0302	14674								
		OBS	1100	0004	34665	2785			14674								
		STD	1200	0003	3467	2786	0002513	0327	14690								
		OBS	1200	0003	34666	2786			14690								
		STD	1300	-0001	3467	2786	0002483	0352	14705								
		OBS	1300	-0001	34665	2786			14705								
		STD	1400	-0003	3467	2786	0002461	0377	14721								
		OBS	1400	-0003	34665	2786			14721								
		STD	1500	-0006	3467	2786	0002429	0401	14737								
		OBS	1500	-0006	34665	2786			14737								
		OBS	1600	-0011	34664	2786			14752								
		OBS	1700	-0013	34663	2786			14768								
		STD	1750	-0014	3466	2786	0002354	0461	14776								
		OBS	1800	-0015	34663	2786			14784								
		OBS	1900	-0017	34660	2786			14800								
		STD	2000	-0018	3466	2786	0002316	0519	14817								
		OBS	2000	-0018	34660	2786			14817								

REFERENCE	SHIP	LATITUDE	LONGITUDE	PORT	MARSDEN		STATION TIME		YEAR	ORIGINATOR'S		DEPTH	MAX. DEPTH	WAVE			WEA-	CLOUD	NODC		
					10"	1"	MO	DAY		HR	1/10			CRUISE	STATION	OBSERVATIONS					
																DIR.				HGT	PER
318037	GL	71118S	039017W		555	19	03	04	060	1968	041	3895	39	00	0	X	X1	6	7	0054	

REFERENCE		SNIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DATE INDEX	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOEC STATION NUMBER		
CTRY CODE	IO. NO.				10"	1"	MO	DAY	HR.1/10			CRUISE NO.	STATION NUMBER			DIR.	NGT	PER	SEA	TYPE	AMT			
318037	GL		70215S	037448W	555	07	03	04	180	1968			042		4023	40	00	0	X		X1	6	7	0055
						WATER		WIND		BARO- METER (mb)		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPT'S	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. mm	DIR.	SPEED OF FORCE		DRY BULB	WET BULB												
								08		507	928	-025 -036		7	31									
MESSNGR TIME HR 1/10	CST NO.	CARGO TYPE	DEPTN (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANDALYT-3107		Σ Δ O DTN. M. 1 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	NH ₃ -N μg - dl/l	NO ₂ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	SCC						
		STD	0000	-0144	3365	2709	0009806		0000	14407	808													
193		OBS	0000	-0144	33646	2709				14407	808	153					069	809						
		STD	0010	-0144	3364	2709	0009823		0010	14409	809													
193		OBS	0010	-0144	33643	2709				14409	809	156					069	814						
		STD	0020	-0140	3368	2711	0009568		0020	14413	808													
193		OBS	0026	-0137	33697	2713				14416	807	162					071	809						
		STD	0030	-0144	3387	2727	0008069		0028	14415	777													
		STD	0050	-0169	3446	2776	0003464		0040	14415	672													
193		OBS	0052	-0171	34497	2779				14415	665	226					095	795						
		STD	0075	-0174	3451	2780	0003069		0048	14418	643													
193		OBS	0078	-0174	34509	2780				14418	641	226					097	798						
		STD	0100	-0170	3451	2780	0003050		0056	14424	640													
193		OBS	0104	-0168	34516	2780				14425	639	230					099	795						
		STD	0125	-0147	3453	2781	0002954		0063	14439	616													
		STD	0150	-0119	3455	2781	0002910		0071	14456	591													
193		OBS	0155	-0113	34550	2781				14460	586	235					100	792						
		STD	0200	-0051	3460	2783	0002779		0085	14497	549													
193		OBS	0207	-0044	34605	2783				14502	544	240					100	784						
		STD	0250	-0021	3462	2783	000277		0099	14519	519													
		STD	0300	-0002	3464	2784	0002719		0112	14537	501													
193		OBS	T0310	0001	34642	2784				14540	498	244					100	779						
		STD	0400	0011	3465	2784	0002716		0139	14559	496													
193		OBS	0411	0012	34652	2784				14562	496	241					100	786						
		STD	0500	0022	3466	2784	0002709		0167	14581	490													
193		OBS	T0512	0023	34661	2784				14584	489	245					100	788						
		STD	0600	0027	3467	2785	0002665		0193	14600	480													
193		OBS	0612	0027	34671	2785				14602	479	245					110	782						
		STD	0700	0025	3467	2785	0002644		0220	14616	478													
193		OBS	0714	0025	34672	2785				14619	478	246					115	783						
		STD	0800	0022	3467	2785	0002636		0246	14632	480													
193		OBS	T0815	0021	34668	2785				14634	485	250					116	790						
170		OBS	T0884	0017	34677	2786				14643	529	240					118	790						
		STD	0900	0016	3468	2786	0002547		0272	14646	527													
170		OBS	T0979	0013	34672	2786				14657	515	236					119	794						
		STD	1000	0013	3467	2785	0002568		0298	14661	500													
193		OBS	T1015	0013	34666	2785				14663	491	242					119	792						
		STD	1100	0009	3467	2785	0002557		0324	14676	508													
170		OBS	1189	0006	34668	2786				14690	521	236					119	793						
		STD	1200	0006	3467	2786	0002523		0349	14691	521													
		STD	1300	0002	3467	2786	0002501		0374	14707	525													
		STD	1400	-0001	3466	2786	0002485		0399	14722	528													
170		OBS	T1477	-0003	34662	2786				14734	531	243					120	792						
		STD	1500	-0004	3466	2786	0002469		0424	14738	532													
		STD	1750	-0010	3466	2786	0002406		0485	14777	544													
170		OBS	1789	-0011	34661	2786				14784	545	240					120	789						
		STD	2000	-0016	3466	2786	0002336		0544	14818	547													
170		OBS	2089	-0018	34657	2786				14832	550	245					119	789						
170		OBS	2389	-0023	34654	2786				14881	566	234					117	788						
		STD	2500	-0025	3465	2786	0002239		0658	14900	567													
170		OBS	2689	-0028	34653	2786				14931	569	243					111	788						
170		OBS	T2993	-0028	34652	2786				14984	555	264					111	778						
		STD	3000	-0028	3465	2786	0002165		0768	14985	555													
170		OBS	3289	-0029	34654	2786				15035	557	254					111	777						
170		OBS	3589	-0033	34652	2786				15087	561	250					111	774						
170		OBS	3889	-0038	34644	2786				15137	562	250					111	772						
170		OBS	3914	-0040	34646	2786				15141	566	249					110	771						
170		OBS	3939	-0039	34643	2786				15146	563	244					107	771						
170		OBS	T3986	-0042	34638	2786				15153	566	246					107	772						
		STD	4000	-0042	3464	2786	0001954		0974	15155	563													
170		OBS	T4013	-0042	34639	2786				15158	558	246					100	779						

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARS DEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER				
CITY CODE	ID. NO.					10"	1"	MO	DAY		HR. 1/10	CRUISE NO.			STATION NUMBER	DIR.	HTG		PER	SEA		TYPE	AMT		
318037		GL	69292S	036522W	519	96	03	05	060	1968		043		4219	42	00	0	X		X7	6	6		0056	
						WATER		WIND		BARO- METER (mbars)		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS									
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB	VIS. CODE												
									02	508	926	-011	-015	6	30										
MESSNGR TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ σ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - dl/l	NH ₃ µg - dl/l	-N µg - dl/l	NO ₂ -N µg - dl/l	NO ₃ -N µg - dl/l	Si D ₄ -Si µg - dl/l	pH								
		STD	0000	-0103	3380	2720	0008777	0000	14429	796															
074		OBS	0000	-0103	33796	2720			14429	796															
		STD	0010	-0106	3379	2720	000880*	0009	14429	798															
074		OBS	0010	-0106	33791	2720			14429	798															
		STD	0020	-0113	3383	2723	0008474	0017	14428	804															
074		OBS	0024	-0118	33878	2727			14427	807															
		STD	0030	-0133	3406	2742	0006644	0025	14423	766															
074		OBS	0049	-0166	34476	2777			14417	666															
		STD	0050	-0166	3448	2777	0003319	0035	14417	665															
		STD	0075	-0163	3449	2778	0003236	0043	14422	642															
074		OBS	0098	-0161	34503	2779			14427	624															
		STD	0100	-0159	3450	2779	0003128	0051	14429	623															
		STD	0125	-0139	3452	2780	0003072	0059	14443	611															
074		OBS	0146	-0123	34530	2780			14454	600															
		STD	0150	-0121	3453	2780	0003017	0066	14455	598															
074		OBS	0194	-0090	34558	2781			14477	570															
		STD	0200	-0081	3457	2782	0002870	0081	14483	564															
		STD	0250	-0023	3461	2782	0002835	0095	14518	519															
074		OBS	0289	0006	34638	2783			14539	496															
		STD	0300	0007	3464	2783	0002770	0109	14541	494															
074		OBS	T0382	0016	34650	2784			14559	482															
		STD	0400	0018	3465	2783	0002759	0137	14563	481															
074		OBS	0478	0023	34650	2783			14578	478															
		STD	0500	0024	3465	2783	0002779	0165	14582	479															
074		OBS	T0574	0025	34657	2784			14595	480															
		STD	0600	0027	3466	2784	0002744	0192	14600	479															
074		OBS	0668	0031	34667	2784			14613	478															
		STD	0700	0032	3467	2784	0002729	0220	14619	477															
074		OBS	T0768	0033	34668	2784			14631	476															
		STD	0800	0032	3467	2784	0002726	0247	14636	476															
		STD	0900	0030	3467	2784	0002702	0274	14652	476															
074		OBS	T0954	0028	34669	2784			14660	476															
		STD	1000	0029	3467	2785	0002688	0301	14668	477															
074		OBS	T1091	0032	34675	2785			14685	480															
		STD	1100	0027	3467	2785	0002679	0328	14684	482															
024		OBS	T1117	0019	34667	2785			14683	486									788						
		STD	1200	0016	3467	2785	000261	0354	14696	488															
		STD	1300	0012	3467	2785	0002580	0380	14711	490															
		STD	1400	0009	3467	2785	0002546	0406	14726	492															
024		OBS	1415	0008	34667	2785			14729	492									786						
		STD	1500	0006	3467	2785	0002528	0431	14742	498															
024		OBS	1710	0000	34663	2785			14775	510									786						
		STD	1750	-0001	3466	2785	0002494	0494	14781	512															
		STD	2000	-0010	3466	2786	0002397	0555	14820	523															
024		OBS	T2006	-0010	34657	2786			14821	523									785						
024		OBS	2305	-0018	34658	2786			14869	528									784						
		STD	2500	-0020	3466	2786	0002272	0672	14902	533															
024		OBS	2605	-0021	34657	2786			14920	536									780						
024		OBS	2905	-0025	34655	2786			14970	544									780						
		STD	3000	-0025	3466	2786	0002173	0783	14987	548															
024		OBS	3205	-0025	34657	2786			15023	554									778						
024		OBS	3505	-0030	34653	2786			15073	555									779						
024		OBS	T3801	-0030	34652	2786			15125	562									777						
		STD	4000	-0030	3465	2786	0002031	0993	15161	562															
024		OBS	4107	-0032	34652	2786			15179	562									777						
024		OBS	4157	-0033	34649	2786			15188	562									777						
024		OBS	4183	-0034	34653	2786			15192	564									781						
024		OBS	T4208	-0035	34651	2786			15196	563									778						
024		OBS	T4233	-0036	34645	2786			15200	555									780						

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPT INDCTR	MARSDEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10°	1°	MO	DAY	HR.	1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA	TYPE	AMT	

318037		GL	69337S	039339W	519	99	03	05	150	1968	044	3995	10	00	10	X	1	6	7	00571
WATER		WIND		RAD- METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mba)	DRY BULB	WET BULB														
		07	S10	908	-002	-011	7	15												

MESSENGER TIME HR 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	$\Sigma \Delta D$ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - ml/l	NH ₃ -N µg - ml/l	NO ₂ -N µg - ml/l	NO ₃ -N µg - ml/l	SIO ₄ -Si µg - ml/l	pH	S C
		STD	0000	-0111	3383	2723	0008529	0000	14425	799							
145		OBS	0000	-0111	33825	2723			14425	799							
		STD	0010	-0113	3382	2723	0008525	0009	14426	800							
145		OBS	0010	-0113	33824	2723			14426	800							
		STD	0020	-0113	3385	2724	0008344	0017	14428	800							
145		OBS	0024	-0116	33856	2725			14427	800							
		STD	0030	-0132	3406	2742	0006647	0024	14424	753							
145		OBS	0049	-0165	34487	2778			14417	655							
		STD	0050	-0165	3449	2778	0003245	0034	14417	654							
145		OBS	0073	-0173	34505	2780			14418	637							
		STD	0075	-0174	3451	2780	0003091	0042	14418	636							
145		OBS	0098	-0176	34510	2780			14421	628							
		STD	0100	-0175	3451	2780	0003029	0050	14421	626							
		STD	0125	-0161	3452	2781	0002972	0057	14432	607							
145		OBS	T0146	-0149	34532	2781			14442	606							
		STD	0150	-0142	3454	2781	0002882	0065	14446	613							
145		OBS	0195	-0075	34585	2783			14485	655							
		STD	0200	-0070	3459	2783	0002767	0079	14488	644							
		STD	0250	-0029	3462	2783	0002728	0093	14516	550							
145		OBS	T0294	-0004	34639	2784			14535	499							
		STD	0300	-0003	3464	2784	0002713	0106	14536	498							
145		OBS	0392	0014	34656	2784			14560	487							
		STD	0400	0015	3466	2784	0002665	0133	14561	486							
145		OBS	T0490	0019	34663	2784			14578	483							
		STD	0500	0019	3466	2784	0002667	0160	14580	484							
145		OBS	0589	0017	34665	2785			14594	488							
		STD	0600	0018	3467	2785	0002645	0186	14596	487							
145		OBS	T0687	0021	34669	2785			14612	482							
		STD	0700	0021	3467	2785	0002636	0213	14614	481							
145		OBS	0782	0020	34670	2785			14628	480							
		STD	0800	0020	3467	2785	0002622	0239	14631	481							
		STD	0900	0017	3467	2785	0002592	0265	14646	485							
145		OBS	T0988	0014	34671	2785			14659	489							

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	INSTRUMENT NO.	MARSON SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	OAT		HR.1/10	CRUISE NO.			STATION NUMBER	DIR	HGT	PER		SEA	TYPE	
318037	GL		70307S	040567W		556	00	03	06	030	1968	045	3892	39	00	0	X		X7	7	8	0058
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. m	DIR.	SPEED OR FORCE	(mb)		DRY RULB	WET RULB									
									03	510	904	-008	-012	6	29							
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME AND MALT-210?		Σ Δ ρ OTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at	pH					
		STD	0000	-0159	3353	2700			0010659	0000	14398	800										
042		OBS	0000	-0159	33530	2700					14398	800					818					
		STD	0010	-0165	3351	2699			0010761	0011	14397	814										
042		OBS	0010	-0165	33514	2699					14397	814					815					
		STD	0020	-0166	3355	2702			0010475	0021	14399	810										
042		OBS	0025	-0167	33618	2707					14400	803					813					
		STD	0030	-0163	3386	2727			0008095	0031	14406	783										
		STD	0050	-0160	3448	2777			000332	0042	14420	709										
042		OBS	0050	-0160	34482	2777					14420	709					811					
042		OBS	0074	-0179	34484	2778					14415	630					809					
		STD	0075	-0179	3448	2778			0003239	0050	14415	630										
		STD	0100	-0177	3449	2779			0003161	0058	14420	626										
042		OBS	0100	-0177	34493	2779					14420	626					807					
		STD	0125	-0168	3450	2779			0003119	0066	14429	616										
042		OBS	0149	-0155	34511	2779					14439	605					806					
		STD	0150	-0154	3451	2780			0003056	0074	14440	605										
042		OBS	0198	-0113	34542	2781					14467	582					805					
		STD	0200	-0111	3454	2781			000295	0089	14468	581										
		STD	0250	-0059	3458	2782			0002890	0103	14501	553										
		STD	0300	-0022	3461	2783			0002804	0118	14527	529										
042		OBS	T0300	-0022	34614	2783					14527	529					803					
042		OBS	0398	0006	34636	2783					14557	495					802					
		STD	0400	0006	3464	2783			0002793	0146	14557	495										
		STD	0500	0021	3466	2784			0002723	0173	14581	486										
042		OBS	T0503	0021	34658	2784					14581	486					801					
042		OBS	0598	0022	34664	2784					14598	493					800					
		STD	0600	0022	3466	2784			0002680	0200	14598	493										
		STD	0700	0023	3467	2784			000268	0227	14615	491										
042		OBS	T0704	0023	34665	2784					14616						799					
042		OBS	T0793	0017	34663	2785					14628	490					798					
		STD	0800	0017	3466	2785			0002652	0254	14629	490										
		STD	0900	0015	3467	2785			0002622	0280	14645	493										
		STD	1000	0013	3467	2785			0002599	0306	14661	495										
042		OBS	T1003	0013	34666	2785					14661	495					796					
012		OBS	T1012	0014	34671	2785					14663	493					798					
		STD	1100	0011	3467	2785			0002547	0332	14677	496										
		STD	1200	0006	3467	2786			0002511	0357	14692	499										
		STD	1300	0002	3467	2786			0002474	0382	14707	502										
012		OBS	1309	0002	34666	2786					14708	502					799					
		STD	1400	-0001	3467	2786			0002478	0407	14722	511										
		STD	1500	-0003	3466	2786			0002470	0432	14738	519										
012		OBS	1607	-0006	34661	2786					14755	525					798					
		STD	1750	-0009	3466	2786			0002423	0493	14778	526										
012		OBS	T1906	-0013	34659	2786					14803	529					798					
		STD	2000	-0015	3466	2786			0002353	0552	14818	533										
012		OBS	2205	-0019	34658	2786					14851	539					796					
		STD	2500	-0025	3466	2786			0002232	0667	14900	541										
012		OBS	2504	-0025	34655	2786					14900	541					796					
012		OBS	2804	-0025	34655	2786					14952	543					794					
		STD	3000	-0026	3466	2786			0002168	0777	14986	553										
012		OBS	3103	-0027	34655	2786					15004	557					794					
012		OBS	3402	-0031	34650	2786					15054	562					795					
012		OBS	T3701	-0035	34642	2786					15105	568					794					
012		OBS	3801	-0041	34638	2785					15120	568					796					
012		OBS	3826	-0044	34628	2785					15123	573					797					
012		OBS	T3855	-0047	34628	2785					15127	571					793					
012		OBS	T3881	-0051	34621	2785					15130	568					796					

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARS DEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLDUD CODES	NDDC STATION NUMBER		
CITY CODE	ID. NO.					10"	1"	MO DAY HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA					
318037	GL		70307S	040567W	556	00	03	06 060	1968		045	3877	20	00	0	X			X1	0 3		0059
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIE. CODE	ND. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLD CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mb)	DRY BULB	WET BULB																
DT	SD	05	S09	904	-019	-024								6	31							

MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S %.	SIGMA-T	SPECIFIC VOLUME ANOMALY-2107	$\Sigma \Delta \sigma$ DTM, M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{at/l}$	NH ₃ -N $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	ST CC
		STD	0000	-0167	3352	2700	001071	0000	14395								
	068	OBS	0000	-0167	33521	2700			14395								
		STD	0010	-0172	3352	2699	001073	0011	14394								
		OBS	0010	-0172	33516	2699			14394								
	005	OBS	0018	-0134	33631	2708			14415								
		STD	0020	-0150	3383	2724	0008358	0020	14410								
		OBS	0020	-0150	33831	2724			14410								
		OBS	0025	-0157	34460	2775			14417								
		STD	0030	-0161	3448	2777	0003374	0026	14416								
		OBS	0030	-0161	34476	2777			14416								
		STD	0050	-0176	3449	2779	000320	0033	14412								
		OBS	0050	-0176	34492	2779			14412								
		STD	0075	-0178	3450	2779	0003103	0041	14416								
		OBS	0075	-0178	34502	2779			14416								
		STD	0100	-0164	3452	2781	0002983	0048	14427								
		OBS	0100	-0164	34521	2781			14427								
		STD	0125	-0136	3456	2783	0002753	0055	14445								
		OBS	0125	-0136	34561	2783			14445								
		STD	0150	-0111	3455	2781	0002901	0062	14460								
		OBS	0150	-0111	34552	2781			14460								
		STD	0200	-0051	3459	2782	0002847	0077	14497								
		OBS	0200	-0051	34591	2782			14497								
		STD	0250	-0008	3464	2784	0002719	0091	14526								
		OBS	0250	-0008	34636	2784			14526								
		STD	0300	0001	3464	2784	0002728	0104	14538								
		OBS	0300	0001	34641	2784			14538								
		STD	0400	0017	3465	2783	0002783	0132	14562								
		OBS	0400	0017	34646	2783			14562								
		STD	0500	0026	3466	2784	0002728	0159	14583								
		OBS	0500	0026	34661	2784			14583								
		STD	0600	0025	3467	2784	0002685	0187	14599								
		OBS	0600	0025	34666	2784			14599								
		STD	0700	0021	3467	2785	0002658	0213	14614								
		OBS	0700	0021	34666	2785			14614								
		STD	0800	0019	3467	2785	0002644	0240	14630								
		OBS	0800	0019	34666	2785			14630								
		STD	0900	0015	3467	2785	0002614	0266	14645								
		OBS	0900	0015	34666	2785			14645								
		STD	1000	0011	3466	2785	0002605	0292	14660								
		OBS	1000	0011	34663	2785			14660								
		STD	1100	0007	3466	2785	0002586	0318	14675								
		OBS	1100	0007	34661	2785			14675								
		STD	1200	0004	3466	2785	0002558	0344	14690								
		OBS	1200	0004	34661	2785			14690								
		STD	1300	0001	3466	2785	0002537	0369	14706								
		OBS	1300	0001	34660	2785			14706								
		STD	1400	-0003	3466	2785	0002528	0395	14721								
		OBS	1400	-0003	34656	2785			14721								
		STD	1500	-0006	3465	2785	0002526	0420	14737								
		OBS	1500	-0006	34652	2785			14737								
		OBS	1600	-0009	34652	2785			14752								
		OBS	1700	-0011	34652	2785			14768								
		STD	1750	-0013	3465	2785	0002444	0482	14776								
		OBS	1800	-0014	34651	2785			14784								
		OBS	1900	-0016	34651	2785			14800								
		STD	2000	-0018	3465	2785	0002382	0542	14817								
		OBS	2000	-0018	34651	2785			14817								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPT FOOT	MARSOEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TD BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT	PER		SEA	TYPE		AMT
318037	GL		693155	042356W		520	92	03	06	150	1968	046	3877	10	00	0	X		X2	7	8		0060
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. MM	DIR.	SPEED OR FORCE	(mbs)		ORY BULB	WET BULB										
									04	S09	876	-005	-011	6	15								
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ θ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PD ₄ -P μg - ml/l	NH ₃ -N μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -S μg - ml/l	pH	S C					
		STO	0000	-0152	3394	2733			0007520	0000	14408	817											
	143	OBS	0000	-0152	33941	2733					14408	817						824					
		STO	0010	-0152	3394	2733			0007522	0008	14409	817											
	143	OBS	0011	-0152	33939	2733					14409	817						824					
		STO	0020	-0154	3394	2733			0007519	0015	14410	819											
	143	OBS	0026	-0155	33939	2733					14410	820						824					
		STO	0030	-0156	3406	2743			0006579	0022	14412	788											
		STO	0050	-0162	3446	2776			0003483	0032	14418	674											
	143	OBS	0052	-0163	34487	2778					14419	666						819					
		STO	0075	-0174	3449	2778			0003207	0041	14418	636											
	143	OBS	0078	-0175	34494	2779					14417	633						819					
		STO	0100	-0161	3451	2780			0003076	0048	14428	614											
	143	OBS	0104	-0158	34514	2780					14430	611						815					
		STO	0125	-0135	3453	2780			0002993	0056	14445	598											
		STO	0150	-0106	3455	2781			0002936	0063	14463	581											
	143	OBS	T0157	-0098	34560	2782					14468	575						811					
		STO	0200	-0043	3461	2783			0002741	0078	14501	533											
	143	OBS	0206	-0037	34612	2783					14505	529						811					
		STO	0250	-0020	3463	2784			0002699	0091	14520	517											
		STO	0300	-0004	3464	2784			0002707	0105	14536	505											
	143	OBS	T0306	-0002	34642	2784					14538	504						809					
		STO	0400	0020	3466	2784			0002703	0132	14564	488											
	143	OBS	0408	0021	34660	2784					14565	487						807					
		STO	0500	0029	3467	2784			0002681	0159	14585	479											
	143	OBS	T0509	0030	34673	2785					14587	478						808					
		STO	0600	0027	3468	2785			0002633	0185	14601	474											
	143	OBS	0610	0027	34675	2785					14602	474						808					
		STO	0700	0027	3468	2785			0002633	0212	14617	476											
	143	OBS	T0711	0027	34675	2785					14619	477						808					
		STO	0800	0024	3467	2785			0002623	0238	14633	483											
	143	OBS	0810	0024	34674	2785					14634	484						807					
		STO	0900	0021	3467	2785			000260	0264	14648	489											
		STO	1000	0017	3467	2785			0002576	0290	14663	494											
	143	OBS	T1006	0017	34673	2785					14664	494						806					

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH 1/10	MARS DEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		TYPE
31	8037	GL	684090	040045W		520	80	03	07	060	1968	047	4178	38		0	2		X7	6	8	0061
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mb)	DRY RULR	WET RULR										
								04	S10	891	-013	-018	4	30								
MESSAGE TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S %.	SIGMA-T		SPECIFIC VOLUME ANOMALY- σ_t		$\Delta \sigma_t$ OBS. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{at/l}$	NH ₃ -N $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C			
		STD	0000	-0111	3393	2731		0007747	0000	14427	813											
047		OBS	0000	-0111	33927	2731				14427	813								820			
		STD	0010	-0111	3392	2731		0007765	0008	14428	813											
047		OBS	0011	-0111	33924	2731				14428	813								820			
		STD	0020	-0112	3393	2731		0007742	0016	14429	816											
047		OBS	0027	-0113	33928	2731				14430	818								820			
		STD	0030	-0122	3402	2739		0006985	0023	14428	794											
		STD	0050	-0165	3445	2775		0003551	0033	14417	680											
047		OBS	0054	-0170	34494	2779				14416	666								816			
		STD	0075	-0172	3450	2779		0003134	0042	14418	659											
047		OBS	0081	-0173	34506	2780				14419	655								811			
		STD	0100	-0154	3452	2780		0003020	0049	14431	636											
047		OBS	0107	-0146	34525	2780				14436	629								809			
		STD	0125	-0124	3454	2781		0002955	0057	14450	612											
		STD	0150	-0092	3457	2782		0002839	0064	14469	587											
047		OBS	T0168	-0068	34586	2782				14484	567								808			
		STD	0200	-0017	3463	2784		000272	0078	14513	525											
047		OBS	0215	0001	34646	2784				14524	510								807			
		STD	0250	0006	3465	2784		000269*	0092	14532	503											
		STD	0300	0014	3465	2784		0002736	0105	14544	495											
047		OBS	T0322	0017	34657	2784				14549	492								804			
		STD	0400	0031	3467	2784		0002720	0132	14569	490											
047		OBS	0430	0034	34670	2784				14575	488								804			
		STD	0500	0035	3468	2785		0002646	0159	14588	479											
047		OBS	T0541	0036	34681	2785				14595	477								801			
		STD	0600	0034	3468	2785		0002642	0186	14604	480											
047		OBS	0648	0033	34678	2785				14611	481								798			
		STD	0700	0032	3468	2785		0002647	0212	14619	482											
047		OBS	T0756	0030	34677	2785				14628	482								796			
		STD	0800	0026	3467	2785		0002666	0239	14633	484											
047		OBS	T0855	0022	34669	2785				14641	487								796			
		STD	0900	0020	3467	2785		0002629	0265	14647	491											
		STD	1000	0016	3467	2785		0002595	0291	14662	500											
011		OBS	T1010	0015	34669	2785				14664	501								797			
047		OBS	T1090	0012	34663	2785				14676	501								794			
		STD	1100	0011	3466	2785		0002603	0317	14677	502											
		STD	1200	0006	3466	2785		0002575	0343	14691	509											
011		OBS	1256	0004	34660	2785				14700	512								794			
		STD	1300	0003	3466	2785		0002554	0369	14707	514											
		STD	1400	0001	3466	2785		0002533	0394	14723	517											
		STD	1500	-0001	3466	2785		000251	0419	14739	521											
011		OBS	1505	-0001	34660	2785				14740	521								793			
		STD	1750	-0007	3466	2786		0002446	0481	14779	530											
011		OBS	T1770	-0007	34657	2785				14782	531								792			
		STD	2000	-0013	3465	2785		0002422	0542	14819	533											
011		OBS	2023	-0013	34653	2785				14823	533								790			
011		OBS	2290	-0018	34657	2786				14866	533								790			
		STD	2500	-0021	3466	2786		0002275	0660	14901	540											
011		OBS	T2556	-0022	34654	2786				14911	544								788			
011		OBS	2843	-0024	34664	2787				14960	581								786			
		STD	3000	-0027	3466	2787		0002105	0769	14986	563											
011		OBS	3123	-0028	34660	2787				15007	556								786			
011		OBS	T3402	-0028	34658	2786				15056	565								784			
011		OBS	3695	-0029	34657	2786				15107	567											
011		OBS	3743	-0030	34658	2787				15115	568								780			
011		OBS	3767	-0030	34655	2786				15119	567								780			
011		OBS	T3793	-0031	34652	2786				15124	568								776			
011		OBS	T3815	-0031	34645	2786				15127	570								777			

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARS DEN SQUARE		STATION TIME ICMT		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAR. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	IO. NO.				10"	1"	MO	DAY		HR	1/10			CRUISE NO.	STATION NUMBER	DIR.	HGT		PER	SEA		TYPE
318037	GL	68409S	040045W	520	80	03	07	090	1968		047	4178	20		2	2		X7	0	3		0062
					WATER		WIND		BARD- METER		AIR TEMP. °C		NO. OBS. DEPTH		SPECIAL OBSERVATIONS							
					COLOR CODE	TRANS. UNIT	DIR.	SPEED OR FORCE	(mb)		DRY BULB	WET BULB	VIS CODE									
					DT	SD	03	S13	892	-011	-015	7	32									
MESSAGE TIME OF HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ _t		S Δ σ DYN. M. x 10 ³		SOUND VELOCITY	O ₂ ml/l	PD ₄ -P μg - ml/l	NH ₄ -N μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH			
		STD	0000	-0111	3390	2728		0007985		0000		14426										
	072	OBS	0000	-0111	33896	2728						14426										
		STD	0010	-0114	3390	2729		0007932		0008		14427										
		OBS	0010	-0114	33901	2729						14427										
		STD	0020	-0115	3391	2730		0007847		0016		14428										
	005	OBS	0020	-0115	33911	2730						14428										
		OBS	0025	-0166	34456	2775						14412										
		STD	0030	-0169	3447	2777		0003391		0021		14412										
		OBS	0030	-0169	34471	2777						14412										
		STD	0050	-0179	3449	2779		0003200		0028		14411										
		OBS	0050	-0179	34491	2779						14411										
		OBS	0064	-0181	34496	2779						14412										
		STD	0075	-0178	3450	2779		000311*		0036		14416										
		OBS	0075	-0178	34501	2779						14416										
		STD	0100	-0148	3454	2781		0002917		0043		14434										
		OBS	0100	-0148	34536	2781						14434										
		STD	0125	-0100	3454	2780		0003075		0051		14461										
		OBS	0125	-0100	34536	2780						14461										
		STD	0150	-0049	3460	2782		0002836		0058		14490										
		OBS	0150	-0049	34595	2782						14490										
		STD	0200	0003	3464	2784		0002744		0072		14522										
		OBS	0200	0003	34641	2784						14522										
		STD	0250	0003	3464	2783		0002757		0086		14531										
		OBS	0250	0003	34639	2783						14531										
		STD	0300	0001	3465	2784		000269		0100		14538										
		OBS	0300	0001	34646	2784						14538										
		OBS	0304	0014	34646	2783						14545										
		STD	0400	0024	3466	2784		0002713		0127		14566										
		OBS	0400	0024	34661	2784						14566										
		STD	0500	0036	3468	2785		0002681		0154		14588										
		OBS	0500	0036	34676	2785						14588										
		STD	0600	0031	3468	2785		0002659		0180		14602										
		OBS	0600	0031	34675	2785						14602										
		STD	0700	0027	3468	2785		0002633		0207		14617										
		OBS	0700	0027	34675	2785						14617										
		STD	0800	0022	3468	2785		0002599		0233		14632										
		OBS	0800	0022	34675	2785						14632										
		STD	0900	0017	3468	2786		0002562		0259		14646										
		OBS	0900	0017	34675	2786						14646										
		STD	1000	0013	3467	2786		0002538		0284		14661										
		OBS	1000	0013	34674	2786						14661										
		STD	1100	0009	3467	2786		0002527		0310		14676										
		OBS	1100	0009	34671	2786						14676										
		STD	1200	0006	3467	2786		0002500		0335		14692										
		OBS	1200	0006	34671	2786						14692										
		STD	1300	0003	3467	2786		0002450		0360		14707										
		OBS	1300	0003	34674	2786						14707										
		STD	1400	-0001	3467	2786		0002411		0384		14722										
		OBS	1400	-0001	34674	2786						14722										
		STD	1500	-0004	3467	2786		0002395		0408		14738										
		OBS	1500	-0004	34672	2786						14738										
		OBS	1600	-0006	34671	2786						14754										
		OBS	1700	-0008	34671	2787						14770										
		STD	1750	-0009	3467	2787		0002341		0467		14778										
		OBS	1800	-0010	34670	2787						14786										
		OBS	1900	-0013	34669	2787						14802										
		STD	2000	-0015	3467	2787		0002294		0525		14818										
		OBS	2000	-0015	34667	2787						14818										

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MO	DAY	HR. 1/10	YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLING	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		MOOC STATION NUMBER
CITY CODE	ID. NO.								CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
318037	GL		68248S	043037W	520	83	03 07	150	1968	048	4133	10	32	0	2		X1	6	7	0063
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
COLOR CODE	TRANS- MIS	DIR.	SPEED OR FORCE		DRY BULB	WET BULB														
			32	505	894	-017	-027	7	15											

MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \sigma$ OYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{at/l}$	NN ₃ -N $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	$\frac{3}{C}$
		STD	0000	-0152	3399	2737	0007129	0000	14408	815							
		OBS	0000	-0152	33992	2737			14408	815							
		STD	0010	-0152	3399	2737	0007138	0007	14410	819							
142		OBS	0011	-0152	33989	2737			14410	820							825
		STD	0020	-0153	3400	2738	0007053	0014	14411	830							
142		OBS	0027	-0154	34048	2742			14413	837							825
		STD	0030	-0155	3412	2748	000612*	0021	14414	815							
		STD	0050	-0160	3446	2776	0003488	0030	14419	708							
142		OBS	0053	-0161	34488	2778			14420	698							822
		STD	0075	-0165	3449	2778	0003231	0039	14422	686							
142		OBS	0079	-0166	34491	2778			14422	678							821
		STD	0100	-0167	3451	2779	0003090	0047	14425	605							
142		OBS	0105	-0167	34509	2780			14426	590							818
		STD	0125	-0163	3451	2780	0003057	0054	14431	540							
		STD	0150	-0149	3453	2781	0002935	0062	14442	509							
142		OBS	T0158	-0143	34532	2781			14446	506							816
		STD	0200	-0089	3457	2782	0002836	0076	14479	566							
142		OBS	0208	-0080	34577	2782			14485	572							813
		STD	0250	-0045	3461	2783	0002722	0090	14508	541							
		STD	0300	-0014	3463	2784	0002727	0104	14531	515							
142		OBS	T0311	-0009	34639	2784			14535	511							811
		STD	0400	0014	3466	2784	0002696	0131	14561	499							
142		OBS	0414	0016	34658	2784			14564	498							811
		STD	0500	0021	3467	2785	0002628	0158	14581	491							
142		OBS	T0516	0022	34671	2785			14584	490							810
		STD	0600	0020	3467	2785	0002616	0184	14597	495							
142		OBS	0618	0020	34671	2785			14600	496							810
		STD	0700	0020	3467	2785	0002606	0210	14614	397							
142		OBS	T0723	0019	34672	2785			14617	394							810
		STD	0800	0016	3467	2785	0002593	0236	14629	484							
142		OBS	0819	0015	34670	2785			14632	500							808
		STD	0900	0013	3467	2785	0002569	0262	14644	502							
		STD	1000	0011	3467	2785	0002552	0287	14660	505							
142		OBS	T1020	0011	34667	2785			14663	505							808

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPLS	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER	
CTRY CODE	ID. NO.					10'	1"	MD	DAY		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
31	8037	GL	67594S	038001W		519	78	03	08	060	1968	049	4428	44	00	0	X		X1	6	7	0064
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB										
									36	S10	934	-003	-008	7	30							
MESSNGR TIME HR 1/10	CST NO.	CARD TYPE	DEPTN (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-X10 ³		Σ Δ D DYN. M. X 10 ³	SOUNO VELOCITY	O ₂ ml/l	PD ₄ -P µg - ml/l	NH ₃ -N µg - ml/l	NO ₂ -N µg - ml/l	NO ₃ -N µg - ml/l	Si D ₄ -Si µg - ml/l	pH	3 C C				
		STD	0000	-0114	3381	2721	0008642		0000	14424	806											
	073	OBS	0000	-0114	33809	2721				14424	806											
		STD	0010	-0116	3382	2722	0008585		0009	14424	818											
	073	OBS	0010	-0116	33815	2722				14424	818											
		STD	0020	-0116	3381	2722	0008603		0017	14426	820											
	073	OBS	0026	-0119	33810	2722				14426	821											
		STD	0030	-0127	3395	2733	0007506		0025	14424	794											
		STD	0050	-0153	3442	2772	0003815		0037	14422	695											
	073	OBS	0052	-0154	34443	2774				14422	688											
		STD	0075	-0153	3446	2775	0003496		0046	14427	663											
	073	OBS	0078	-0152	34466	2776				14428	659											
		STD	0100	-0141	3448	2777	0003368		0054	14437	629											
	073	OBS	0103	-0139	34486	2777				14438	625											
		STD	0125	-0110	3451	2778	0003235		0063	14456	601											
		STD	0150	-0081	3454	2779	0003113		0070	14474	576											
	073	OBS	T0155	-0076	34542	2779				14477	572											
		STD	0200	-0036	3459	2781	0002966		0086	14504	539											
	073	OBS	0205	-0032	34590	2781				14507	536											
		STD	0250	0020	3461	2780	0003097		0101	14538	502											
		STD	0300	0053	3463	2780	0003157		0116	14562	479											
	073	OBS	T0305	0055						478												
		STD	0400	0041	3467	2783	000279		0146	14573	484											
	073	OBS	0406	0040	34667	2784				14574	484											
		STD	0500	0045	3468	2784	0002722		0174	14592	473											
	073	OBS	T0511	0046	34680	2784				14594	472											
		STD	0600	0047	3468	2784	000271		0201	14610	471											
	073	OBS	0606	0047	34683	2784				14611	471											
		STD	0700	0043	3468	2784	0002711		0228	14624	472											
	073	OBS	T0711	0042	34680	2785				14626	472											
	073	OBS	T0799	0038	34678	2785				14639	487											
		STD	0800	0038	3468	2785	0002695		0255	14639	487											
		STD	0900	0036	3468	2785	0002688		0282	14654	474											
		STD	1000	0033	3468	2785	0002681		0309	14670	461											
	024	OBS	T1004	0033						460												
	073	OBS	T1005	0033						478												
	024	OBS	1064	0029	34675	2785				14679	480											
		STD	1100	0028	3468	2785	0002650		0336	14685	481											
		STD	1200	0025	3468	2785	0002627		0362	14700	485											
		STD	1300	0021	3468	2785	0002587		0388	14715	490											
	024	OBS	1366	0018	34676	2786				14725	494											
		STD	1400	0016	3468	2786	0002551		0414	14730	498											
		STD	1500	0011	3467	2786	000252		0439	14745	507											
	024	OBS	T1669	0003	34669	2786				14770	518											
		STD	1750	-0000	3467	2786	0002455		0501	14782	519											
	024	OBS	1969	-0008	34663	2786				14816	522											
		STD	2000	-0009	3466	2786	0002405		0562	14821	523											
	024	OBS	2269	-0015	34659	2786				14864	532											
		STD	2500	-0020	3466	2786	0002279		0679	14902	543											
	024	OBS	T2569	-0021	34655	2786				14913	546											
	024	OBS	2869	-0024	34659	2786				14964	555											
		STD	3000	-0027	3466	2786	0002148		0790	14986	557											
	024	OBS	3169	-0029	34652	2786				15014	559											
	040	OBS	T3460	-0031	34653	2786				15065	564											
	040	OBS	3774	-0032	34650	2786				15120	566											
		STD	4000	-0034	3465	2786	0001975		0996	15159	567											
	040	OBS	4075	-0035	34652	2786				15172	568											
	040	OBS	4326	-0037	34652	2786				15216	570											
	040	OBS	T4380	-0038	34650	2786				15225	571											
	040	OBS	T4401	-0041	34649	2786				15228	568											

REFERENCE	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DATE INDEX	MARSEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER		
					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA		TYPE	AMT
318033	GL	675940	038001W	519	78	03	08	090	1968		049		4352	20	00	0	X	X1	0	3	0065	
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS										
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB															
		DT	SD	26	S05	938	-013	-017	7	33												
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-30°	Σ Δ D OYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NH ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	Si O ₄ -Si μg - at/l	pH	S C					
	082	STD	0000	-0117	3379	2720	0008809	0000	14422													
		OBS	0000	-0117	33786	2720			14422													
		STD	0010	-0117	3379	2720	0008804	0009	14424													
		OBS	0010	-0117	33786	2720			14424													
		STD	0020	-0116	3379	2720	0008802	0018	14426													
		OBS	0020	-0116	33786	2720			14426													
		OBS	0025	-0150	34276	2760			14417													
		STD	0030	-0154	3440	2770	0004014	0024	14418													
		OBS	0030	-0154	34395	2770			14418													
		OBS	0033	-0157	34417	2772			14417													
		STD	0050	-0151	3445	2774	0003622	0032	14423													
		OBS	0050	-0151	34446	2774			14423													
		OBS	0070	-0139	34471	2776			14433													
		OBS	0073	-0140	34466	2776			14428													
		STD	0075	-0137	3446	2775	0003538	0041	14434													
		OBS	0075	-0137	34461	2775			14434													
		STD	0100	-0124	3449	2777	000334	0049	14445													
		OBS	0100	-0124	34491	2777			14445													
		STD	0125	-0115	3450	2777	0003316	0058	14453													
		OBS	0125	-0115	34497	2777			14453													
		STD	0150	-0057	3457	2780	000302	0065	14486													
		OBS	0150	-0057	34566	2780			14486													
		STD	0200	-0002	3462	2782	0002869	0080	14520													
		OBS	0200	-0002	34621	2782			14520													
		STD	0250	0054	3467	2783	0002819	0094	14554													
		OBS	0250	0054	34671	2783			14554													
		STD	0300	0054	3467	2783	0002801	0108	14563													
		OBS	0300	0054	34674	2783			14563													
		STD	0400	0040	3467	2784	0002778	0136	14573													
		OBS	0400	0040	34666	2784			14573													
		STD	0500	0044	3467	2784	000275	0164	14591													
		OBS	0500	0044	34674	2784			14591													
		STD	0600	0047	3468	2784	0002726	0191	14610													
		OBS	0600	0047	34681	2784			14610													
		STD	0700	0043	3469	2785	0002674	0218	14624													
		OBS	0700	0043	34685	2785			14624													
		STD	0800	0037	3468	2785	000265	0245	14638													
		OBS	0800	0037	34683	2785			14638													
		STD	0900	0033	3468	2785	0002639	0271	14653													
		OBS	0900	0033	34681	2785			14653													
		STD	1000	0032	3469	2786	0002597	0298	14670													
		OBS	1000	0032	34686	2786			14670													
		STD	1100	0029	3469	2786	0002576	0323	14685													
		OBS	1100	0029	34686	2786			14685													
		STD	1200	0023	3469	2786	0002529	0349	14699													
		OBS	1200	0023	34686	2786			14699													
		STD	1300	0017	3469	2786	0002479	0374	14714													
		OBS	1300	0017	34686	2786			14714													
		STD	1400	0014	3468	2786	0002489	0399	14729													
		OBS	1400	0014	34681	2786			14729													
		STD	1500	0009	3468	2786	0002458	0424	14744													
		OBS	1500	0009	34679	2786			14744													
		OBS	1600	0006	34678	2786			14759													
		OBS	1700	0002	34677	2787			14775													
		STD	1750	-0001	3468	2787	0002372	0484	14782													
		OBS	1800	-0003	34676	2787			14789													
		OBS	1900	-0006	34676	2787			14805													
		STD	2000	-0008	3468	2787	0002298	0542	14821													
		OBS	2000	-0008	34676	2787			14821													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARS SQUARE	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"		MO	DAY			HR.1/10	CRUISE NO.	STATION NUMBER		DR.	HGT	
31	8037	GL	673925	040018W	520	70	03 08 170	1968		050	4279	10	00	0	X		X1	67	0066
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
		COLOR CODE	TRANS. (m)	CIR.	SPEED OR FORCE	mbs		DRY BULB	WET BULB										
					08	S11	920	-028	-038	6	15								
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \sigma$ OTN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	NH ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	pH	CO ₂		
		STD	0000	-0142	3411	2747	0006228	0000	14415	795									
166		OBS	0000	-0142	34113	2747			14415	795									
		STD	0010	-0142	3411	2747	0006230	0006	14416	802									
166		OBS	0010	-0142	34112	2747			14416	802									
		STD	0020	-0144	3412	2747	0006196	0012	14417	808									
166		OBS	0025	-0146	34117	2747			14417	811									
		STD	0030	-0151	3420	2754	0005518	0018	14417	776									
		STD	0050	-0167	3449	2778	0003231	0027	14417	681									
166		OBS	0050	-0167	34491	2778			14417	681									
		STD	0075	-0172	3452	2781	0002982	0035	14419	667									
166		OBS	0075	-0172	3499P	2819P				667									
		STD	0100	-0168	3454	2782	0002826	0042	14425	642									
166		OBS	0100	-0168	3351P	2699P				642									
		STD	0125	-0117	3456	2782	0002827	0049	14453	596									
		STD	0150	-0069	3458	2782	0002845	0056	14480	554									
166		OBS	0150	-0069	34582	2782			14480	554									
		STD	0200	0019	3462	2781	0002993	0071	14529	484									
166		OBS	T0204	0023						480									
		STD	0250	0022	3464	2782	0002856	0085	14539	482									
166		OBS	T0299	0020	34663	2784			14547	483									
		STD	0300	0020	3466	2784	0002674	0099	14547	483									
		STD	0400	0040	3468	2785	0002679	0126	14573	471									
166		OBS	0401	0040	34679	2785			14573	471									
		STD	0500	0040	3469	2785	0002633	0153	14590	468									
166		OBS	T0503	0040	34686	2785			14590	468									
		STD	0600	0038	3469	2785	0002617	0179	14606	466									
166		OBS	0601	0038	34687	2785			14606	466									
		STD	0700	0039	3469	2785	0002637	0205	14623	468									
166		OBS	T0700	0039	34686	2785			14623	468									
		STD	0800	0033	3468	2785	0002643	0232	14637	467									
166		OBS	0802	0033	34679	2785			14637	467									
		STD	0900	0028	3468	2785	0002615	0258	14651	472									
		STD	1000	0025	3468	2785	0002594	0284	14667	482									
166		OBS	T1000	0025	34679	2785			14667	482									

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	AARS- DEN	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLDUD CODES	NODC STATION NUMBER
CITY CODE	IO. HD.					10"	1"	MD	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA			
318037		GL	67315S	044128W		520	74	03	09	030	1968	051	3713	10	00	0	X		X7	718		0067
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
CDLDR CODE	TRANS. UNIT	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	830	-018	-023	6					15								
				04	S18			830	-018	-023	6	15										
MESSENGR TIME HR 1/10	CASE NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PD ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	NH ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiD ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	pH	ATP					

		STD	0000	-0181													
		OBS	0000	-0181													
040		OBS	0009		33899					747							
		STD	0010	-0181	3390	2731	0007765		14395	747							
		STD	0020	-0182	3390	2731	0007735		14396	748							
040		OBS	0024	-0182	33903	2731			14397	748							
		STD	0030	-0173	3406	2743	0006535		14404	724							
040		OBS	0049	-0158	34389	2770			14419	672							
		STD	0050	-0159	3439	2770	0004028		14419	671							
040		OBS	0073	-0168	34471	2777			14420	656							
		STD	0075	-0168	3447	2777	000336*		14420	656							
040		OBS	0097	-0168	34483	2778			14424	651							
		STD	0100	-0167	3449	2778	0003242		14425	649							
		STD	0125	-0149	3451	2779	0003100		14438	629							
040		OBS	0145	-0126	34529	2780			14452	606							
		STD	0150	-0115	3454	2781	0002978		14458	596							
040		OBS	T0194	-0038	34608	2783			14502	524							
		STD	0200	-0033	3461	2783	0002791		14506	521							
		STD	0250	-0001	3464	2784	0002727		14529	498							
040		OBS	0292	0016	34660	2784			14544	486							
		STD	0300	0017	3466	2784	0002675		14545	486							
040		OBS	T0390	0022	34666	2785			14563	486							
		STD	0400	0023	3467	2785	0002639		14565	484							
040		OBS	T0492	0032	34675	2785			14585	475							
		STD	0500	0032	3468	2785	0002663		14586	475							
040		OBS	0588	0034	34680	2785			14602	478							
		STD	0600	0034	3468	2785	0002642		14604	477							
040		OBS	T0683	0032	34680	2785			14617	475							
		STD	0700	0031	3468	2785	0002624		14619	476							
040		OBS	T0796	0026	34676	2785			14633	483							
		STD	0800	0026	3468	2785	0002621		14633	483							
		STD	0900	0022	3467	2785	0002615		14648	485							
040		OBS	T0992	0019	34671	2785			14662	486							

REFERENCE		SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	PORT CODE	MARSON SQUARE		STATION TIME IGMTI		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLE'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER				
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HRT/10	CRUISE NO.			STATION NUMBER	OR.	HGT		PER	SEA		TYPE	AMT		
31	8037	GL	67315S	044126W		520	74	03	09	060	1968		051		3713	31	00	0	X		X7	0	3		0068
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mb)	DRY BULB	WET BULB													
						OT	SD	03	S19	820	-021	-024	2	41											
MESSAGE TIME HR	1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T		SPECIFIC VOLUME ANOMALY-307		$\Sigma \Delta$ O OYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - ml/l	NH ₃ -N µg - ml/l	NO ₂ -N µg - ml/l	NO ₃ -N µg - ml/l	SiO ₄ -Si µg - ml/l	pH						
048			STD	0000	-0183	3390	2730		0007784	0000	14392														
			OBS	0000	-0183	33897	2730				14392														
			STD	0010	-0184	3390	2730		000779	0008	14393														
			OBS	0010	-0184	33895	2730				14393														
			STD	0020	-0183	3392	2732		0007609	0015	14396														
			OBS	0020	-0183	33918	2732				14396														
			OBS	0025	-0158	34429	2773				14416														
			STD	0030	-0160	3443	2773		0003760	0021	14416														
			OBS	0030	-0160	34426	2773				14416														
			STD	0050	-0166	3446	2775		0003495	0028	14417														
			OBS	0050	-0166	34457	2775				14417														
			STD	0075	-0167	3448	2777		0003333	0037	14420														
			OBS	0075	-0167	34476	2777				14420														
			STD	0100	-0157	3450	2778		0003195	0045	14430														
			OBS	0100	-0157	34496	2778				14430														
			STD	0125	-0130	3455	2782		0002888	0053	14447														
			OBS	0125	-0130	34546	2782				14447														
			STD	0150	-0085	3461	2785		0002593	0060	14473														
			OBS	0150	-0085	34606	2785				14473														
			STD	0200	-0005	3465	2784		0002663	0073	14519														
			OBS	0200	-0005	34646	2784				14519														
			STD	0250	0013	3466	2784		0002693	0086	14536														
			OBS	0250	0013	34655	2784				14536														
			STD	0300	0023	3466	2784		0002736	0100	14548														
			OBS	0300	0023	34657	2784				14548														
			STD	0400	0026	3467	2784		0002681	0127	14567														
			OBS	0400	0026	34667	2784				14567														
			STD	0500	0034	3468	2785		0002668	0154	14587														
			OBS	0500	0034	34676	2785				14587														
			STD	0600	0034	3468	2785		0002672	0180	14604														
			OBS	0600	0034	34676	2785				14604														
		STD	0700	0031	3468	2785		0002647	0207	14619															
		OBS	0700	0031	34677	2785				14619															
		STD	0800	0027	3468	2785		0002621	0233	14634															
		OBS	0800	0027	34677	2785				14634															
		STD	0900	0024	3468	2785		0002600	0259	14649															
		OBS	0900	0024	34677	2785				14649															
		STD	1000	0020	3468	2786		0002570	0285	14664															
		OBS	1000	0020	34677	2786				14664															
		STD	1100	0016	3468	2786		0002546	0311	14679															
		OBS	1100	0016	34676	2786				14679															
		STD	1200	0013	3468	2786		0002520	0336	14695															
		OBS	1200	0013	34676	2786				14695															
		STD	1300	0008	3468	2786		0002477	0361	14709															
		OBS	1300	0008	34676	2786				14709															
		STD	1400	0005	3468	2786		0002448	0386	14725															
		OBS	1400	0005	34676	2786				14725															
		STD	1500	0001	3468	2786		0002409	0410	14740															
		OBS	1500	0001	34676	2786				14740															
		OBS	1600	-0003	34676	2787				14755															
		OBS	1700	-0006	34676	2787				14771															
		STD	1750	-0008	3468	2787		0002314	0469	14779															
		OBS	1800	-0009	34676	2787				14787															
		OBS	1900	-0012	34676	2787				14802															
		STD	2000	-0014	3468	2787		0002238	0526	14819															
		OBS	2000	-0014	34676	2787				14819															
		OBS	2100	-0016	34675	2787				14835															
		OBS	2200	-0018	34674	2787				14851															
		OBS	2300	-0021	34673	2787				14867															
		OBS	2400	-0022	34673	2787				14884															
		STD	2500	-0023	3467	2787		000213	0635	14901															
		OBS	2500	-0023	34672	2787				14901															
		OBS	2600	-0024	34672	2787				14918															
		OBS	2700	-0025	34671	2787				14934															
		OBS	2800	-0027	34669	2787				14951															
		OBS	2900	-0028	34668	2787				14968															
		STD	3000	-0029	3467	2787		0002045	0739	14985															
		OBS	3000	-0029	34667	2787				14985															
		OBS	3100	-0029	34666	2787				15002															

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARS SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
CTRY CODE	ID. NO.					10"	1"	MO DAY HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT	
31	8037	GL	672200	047223W	520	77	03	09 240	1968		052	3839	38	00	0	X		X7	7	8		0069
		WATER		WIND		BARO- METER		AIR TEMP. °C		VCL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mb)		DRY BULB	WET BULB													
					00	500	805	-029	-032	4	30											
MESSNGR TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	NN ₃ -N μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	Si O ₄ -Si μg - at/l	pH	S CCT					
		STD	0000	-0183	3402	2740	0006877	0000	14394	722												
	232	OBS	0000	-0183	34015	2740			14394	722							796					
		STD	0010	-0184	3401	2740	0006899	0007	14395	731												
232		OBS	0010	-0184	34011	2740			14395	731							796					
		STD	0020	-0184	3402	2740	0006838	0014	14397	734												
232		OBS	0025	-0184	34021	2741			14398	736							797					
		STD	0030	-0181	3408	2745	0006362	0020	14401	729												
		STD	0050	-0171	3428	2761	000484*	0032	14412	697												
232		OBS	0051	-0170	34292	2762			14412	695							795					
		STD	0075	-0163	3447	2776	000339	0042	14422	651												
232		OBS	0076	-0162	34472	2777			14423	649							794					
		STD	0100	-0142	3451	2779	0003135	0050	14437	611												
232		OBS	0102	-0140	34514	2779			14438	608							794					
		STD	0125	-0097	3455	2781	000298	0058	14463	576												
		STD	0150	-0057	3459	2782	0002837	0065	14486	545												
232		OBS	0153	-0053	34595	2783			14488	542							788					
		STD	0200	0002	3464	2784	0002746	0079	14522	493												
232		OBS	0203	0005	34646	2784			14524	491							785					
		STD	0250	0016	3466	2784	0002672	0092	14537	491												
		STD	0300	0023	3466	2784	0002714	0106	14548	491												
232		OBS	T0306	0024	34665	2784			14550	491							784					
		STD	0400	0027	3467	2785	000267	0133	14567	487												
232		OBS	0406	0027	34669	2785			14568	487							782					
		STD	0500	0034	3467	2784	000271	0160	14587	477												
232		OBS	T0508	0034	34675	2785			14588	476							781					
		STD	0600	0037	3468	2785	000266	0187	14605	475												
232		OBS	0608	0037	34683	2785			14606	475							781					
		STD	0700	0031	3468	2785	0002626	0213	14619	475												
232		OBS	T0703	0031	34680	2785			14619	475							781					
		STD	0800	0029	3468	2785	0002607	0239	14635	490												
232		OBS	T0809	0029	34681	2785			14636	491							779					
		STD	0900	0025	3468	2786	0002585	0265	14650	480												
179		OBS	T0913	0024	34676	2785			14651	479							784					
		STD	1000	0021	3468	2786	0002565	0291	14665	484												
232		OBS	T1009	0021	34679	2786			14666	484							780					
179		OBS	1014	0021	34674	2785			14667	494							784					
		STD	1100	0017	3467	2785	0002598	0317	14680	495												
		STD	1200	0013	3467	2785	0002565	0343	14695	497												
179		OBS	1268	0011	34666	2785			14705	499							782					
		STD	1300	0010	3467	2785	0002568	0368	14710	501												
		STD	1400	0007	3467	2785	0002547	0394	14726	507												
		STD	1500	0004	3466	2785	0002525	0419	14741	513												
179		OBS	T1521	0003	34664	2785			14744	514							783					
		STD	1750	-0008	3466	2786	0002410	0481	14778	526												
179		OBS	1828	-0011	34663	2786			14790	529							783					
		STD	2000	-0012	3466	2786	0002353	0540	14819	534												
179		OBS	2134	-0014	34662	2786			14841	537							783					
179		OBS	2442	-0022	34657	2786			14891	544							782					
		STD	2500	-0022	3466	2786	0002250	0655	14901	545												
179		OBS	2749	-0025	34654	2786			14943	551							781					
		STD	3000	-0028	3465	2786	0002165	0766	14985	557												
179		OBS	T3062	-0029	34651	2786			14995	558							780					
179		OBS	3364	-0034	34646	2786			15046	564							780					
179		OBS	T3670	-0043	34640	2786			15096	577							779					
179		OBS	3751	-0052	34632	2785			15106	579							778					
179		OBS	T3779	-0058	34630	2786			15109	585							781					
179		OBS	3802	-0063	34635	2786			15111	594							781					
179		OBS	T3828	-0065	34643	2787			15114	599							785					

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRAFT INCHES	MARSDEH SQUARE		STATION TIME IGMT			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT	PER		SEA	TYPE	
318037	GL		67220S	047223W		520	77	03	10	060	1968		052	3768	10	00	0	X		X7	0 3		0070
		WATER COLOR CODE	TRANS. (m)	WIND DIR.	SPEED OR FORCE	BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS												
							DRY BULB	WET BULB															
		DT	SD	00	S00	794	-032	-034	5	20													
MESSENGR TIME HR 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME AND MALT-2107	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	NH ₃ -N μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	1 C						
		STD	0000	-0185	3403	2741																	
048		OBS	0000	-0185	34025	2741	0006796	0000	14393														
		STD	0010	-0185	3403	2741	0006789	0007	14395														
		OBS	0010	-0185	34025	2741			14395														
		STD	0020	-0185	3403	2741	0006782	0014	14396														
		OBS	0020	-0185	34025	2741			14396														
		OBS	0025	-0183	34026	2741			14398														
		STD	0030	-0175	3408	2745	0006407	0020	14404														
		OBS	0030	-0175	34076	2745			14404														
		STD	0050	-0165	3447	2776	0003429	0030	14417														
		OBS	0050	-0165	34466	2776			14417														
		STD	0075	-0150	3450	2779	000319*	0038	14429														
		OBS	0075	-0150	34501	2779			14429														
		STD	0100	-0115	3454	2780	0003028	0046	14450														
		OBS	0100	-0115	34536	2780			14450														
		STD	0125	-0080	3457	2781	0002926	0053	14471														
		OBS	0125	-0080	34566	2781			14471														
		STD	0150	-0021	3463	2784	0002736	0061	14503														
		OBS	0150	-0021	34626	2784			14503														
		STD	0200	0016	3466	2784	000271	0074	14529														
		OBS	0200	0016	34655	2784			14529														
		STD	0250	0019	3466	2784	000272	0088	14538														
		OBS	0250	0019	34656	2784			14538														
		STD	0300	0025	3467	2784	0002688	0101	14549														
		OBS	0300	0025	34665	2784			14549														
		STD	0400	0030	3467	2785	0002676	0128	14568														
		OBS	0400	0030	34671	2785			14568														
		STD	0500	0034	3468	2785	0002638	0155	14587														
		OBS	0500	0034	34680	2785			14587														
		STD	0600	0034	3468	2785	0002634	0181	14604														
		OBS	0600	0034	34681	2785			14604														
		STD	0700	0031	3468	2785	0002617	0207	14619														
		OBS	0700	0031	34681	2785			14619														
		STD	0800	0028	3468	2785	0002598	0233	14634														
		OBS	0800	0028	34681	2785			14634														
		STD	0900	0024	3468	2786	0002577	0259	14649														
		OBS	0900	0024	34680	2786			14649														
		STD	1000	0020	3468	2786	0002548	0285	14664														
		OBS	1000	0020	34680	2786			14664														

REFERENCE CTRY CODE	IO. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MO 1/10	DAY 1/10	HR. 1/10	YEAR	ORIGINATOR'S			DEPTH ID BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		WDDC STATION NUMBER
									CRUISE NO.	STATION NUMBER				DIR	HGT	PER	SEA		TYPE	AMT	

318037	GL	671905	048598W	520	78	03	10	180	1968	053		3585	10	00	0	X		X1	7	7	0071
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WATER			WIND			AIR TEMP. °C			SPECIAL OBSERVATIONS		
COLOR CODE	TRANS. M	DIR.	SPEED OR FORCE	BARO- METER (mb)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS			

		00	500	789	-001	-011	6	15			
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MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-287	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - ml/l$	NN ₃ -N $\mu g - ml/l$	NO ₂ -N $\mu g - ml/l$	NO ₃ -N $\mu g - ml/l$	SiO ₄ -Si $\mu g - ml/l$	pH	S C C
		STD	0000	-0177	3405	2742	0006645	0000	14397	723							
189		OBS	0000	-0177	34047	2742			14397	723							812
		STD	0010	-0182	3405	2743	0006627	0007	14397	731							
189		OBS	0010	-0182	34047	2743			14397	731							812
		STD	0020	-0172	3428	2761	0004855	0012	14406	685							
189		OBS	0026	-0168	34380	2769			14411	665							808
		STD	0030	-0167	3439	2770	0004016	0017	14412	661							
		STD	0050	-0164	3444	2774	000363	0024	14417	642							
189		OBS	0052	-0164	34442	2774			14418	640							807
		STD	0075	-0161	3447	2776	0003433	0033	14423	655							
189		OBS	0078	-0161	34468	2776			14424	657							806
		STD	0100	-0164	3448	2777	0003298	0042	14426	643							
189		OBS	0104	-0164	34488	2778			14427	640							806
		STD	0125	-0152	3450	2779	0003167	0050	14436	632							
		STD	0150	-0127	3453	2780	0003010	0058	14452	612							
189		OBS	0155	-0120	34534	2780			14457	607							805
		STD	0200	-0031	3462	2784	0002725	0072	14507	531							
189		OBS	0207	-0021	34625	2783			14512	522							801
		STD	0250	0002	3465	2784	0002668	0085	14530	499							
		STD	0300	0022	3467	2785	0002632	0099	14548	482							
189		OBS	T0311	0026	34672	2785			14552	480							798
		STD	0400	0032	3467	2785	0002673	0125	14569	481							
189		OBS	0411		34673				481								798
		STD	0500	0036	3468	2785	000265	0152	14588	479							
189		OBS	T0516	0037	34682	2785			14591	478							800
		STD	0600	0039	3469	2785	0002637	0178	14606	473							
189		OBS	0615	0039	34685	2785			14608	472							801
		STD	0700	0036	3469	2785	0002623	0204	14621	477							
189		OBS	0716	0035	34685	2785			14624	478							799
		STD	0800	0032	3469	2786	0002583	0230	14636	479							
189		OBS	T0818	0031	34687	2786			14639	480							799
		STD	0900	0027	3469	2786	0002563	0256	14651	484							
		STD	1000	0023	3468	2786	0002549	0282	14666	491							
189		OBS	T1014	0022	34683	2786			14668	492							798

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	MARSDEN SQUARE		STATION TIME IGMTJ		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLDUD CODES		NODC STATION NUMBER			
CRUISE CODE	ID. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		TYPE	AMT	
318037		GL	67135S	049577W		520	79	03	11	000	1968		054	3664	37	00	10	X		X1	7	7		0072
		WATER		WIND		BARO- METER UNSAT	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS													
		COLOR CODE	TRANS. UN	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																
						15	S09	805	-026	-036	6	29												
MESSENGER TIME OF HR 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ OYN. M. x 10 ³	SOUND VELOCITY	D ₂ ml/l	PO ₄ -P $\mu g - ml/l$	NH ₃ -N $\mu g - ml/l$	NO ₃ -N $\mu g - ml/l$	NO ₂ -N $\mu g - ml/l$	SiO ₄ -Si $\mu g - ml/l$	pH	S C							
		STD	0000	-0181	3410	2747	0006198	0000	14396	690														
	009	OBS	0000	-0181	34104	2747			14396	690							809							
		STD	0010	-0181	3410	2747	0006199	0006	14398	697														
	009	OBS	0010	-0181	34103	2747			14398	697							808							
		STD	0020	-0176	3414	2750	000592	0012	14402	683														
	009	OBS	0026	-0172	34181	2753			14406	674							809							
		STD	0030	-0165	3423	2757	0005250	0018	14410	664														
		STD	0050	-0141	3443	2773	0003774	0027	14428	625														
	009	OBS	0052	-0139	34439	2773			14429	622							806							
		STD	0075	-0131	3448	2776	0003412	0036	14437	602														
	009	OBS	0077	-0130	34483	2776			14438	601							805							
		STD	0100	-0122	3450	2778	0003278	0044	14446	600														
	009	OBS	0103	-0120	34505	2778			14448	599							802							
		STD	0125	-0089	3454	2780	0003088	0052	14466	572														
		STD	0150	-0055	3457	2781	0002999	0060	14487	544														
	009	OBS	0155	-0048	34582	2781			14491	538							800							
		STD	0200	-0010	3464	2783	000279*	0074	14526	489														
	009	OBS	T0206	0016	34649	2784			14530	484							796							
		STD	0250	0023	3466	2784	0002713	0088	14540	480														
		STD	0300	0027	3466	2784	0002738	0102	14550	476														
	009	OBS	0309	0028	34664	2784			14552	475							796							
		STD	0400	0027	3466	2784	0002725	0129	14567	475														
	009	OBS	T0412	0027	34662	2784			14569	475							795							
		STD	0500	0036	3468	2785	0002674	0156	14588	466														
	009	OBS	T0513	0037	34679	2785			14590	465							795							
		STD	0600	0039	3468	2785	0002675	0183	14606	470														
	009	OBS	0614	0039	34682	2785			14608	471							795							
		STD	0700	0036	3468	2785	0002660	0209	14621	468														
	009	OBS	0714	0035	34680	2785			14623	468							795							
		STD	0800	0029	3468	2785	0002613	0236	14635	471														
	009	OBS	0814	0028	34679	2785			14637	472							795							
		STD	0900	0025	3468	2785	0002596	0262	14650	479														
	036	OBS	0944Q	00390	34680	27850																		
		STD	1000	0022	3468	2785	0002581	0288	14665	486														
	009	OBS	T1014	0022	34678	2786			14668	487							794							
	036	OBS	1046	0026	34673	2785			14675	484							795							
		STD	1100	0024	3467	2785	0002633	0314	14683	489														
		STD	1200	0019	3467	2785	0002592	0340	14697	496														
		STD	1300	0015	3467	2785	0002558	0366	14713	501														
	036	OBS	1350	0012	34673	2786			14720	502							795							
		STD	1400	0009	3467	2786	0002527	0391	14727	502														
		STD	1500	0003	3467	2786	0002471	0416	14741	501														
	036	OBS	1554	-0000	34668	2786			14749	500							796							
		STD	1750	-0008	3466	2786	0002410	0477	14778	516														
	036	OBS	T1856	-0011	34660	2786			14795	523							797							
		STD	2000	-0015	3466	2786	0002346	0536	14818	528														
	036	OBS	2166	-0019	34655	2786			14845	534							797							
	036	OBS	2472	-0025	34658	2786			14895	544							795							
		STD	2500	-0026	3466	2786	0002199	0650	14899	545														
	036	OBS	2780	-0030	34656	2786			14946	551							795							
		STD	3000	-0032	3465	2786	0002132	0758	14983	556														
	036	OBS	T3093	-0033	34649	2786			14999	558							792							
	036	OBS	3390	-0037	34644	2786			15049	564							794							
	036	OBS	3551	-0041	3469P	2790P			570								788							
	036	OBS	T3596	-0052	34629	2785			15079	577							790							
	036	OBS	T3623	-0059	34631	2786			15080	585							792							
	036	OBS	T3659	-0066	34632	2786			15084	583							795							

REFERENCE		SHIP CODE	LATITUDE ° ' 10"	LONGITUDE ° ' 10"	DUBL. MO. YR.	MARSDEN SQUARE		STATION TIME IGMT		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
						WATER		WIND			BARO- METER				AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS		SPECIAL OBSERVATIONS		
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mb)		DRY BULB	WET BULB													
31	8037	GL	67135S	049577W	520	79	03	11	060	1968	054		3603	20	00	0	X		X1	0	3	0073
						DT	SD	14	S06	811	-027	-032	6	31								
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ σ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	NH ₃ -N μg - dl/l	NO ₂ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	S C				
067		STO	0000	-0182	3397	2736	0007233		0000	14394												
		OBS	0000	-0182	33969	2736				14394												
		OBS	0009	-0181	34058	2743				14397												
		STO	0010	-0179	3406	2743	0006549		0007	14398												
		OBS	0010	-0179	34058	2743				14398												
		STD	0020	-0170	3421	2756	0005374		0013	14406												
		OBS	0020	-0170	34213	2756				14406												
		OBS	0025	-0152	34407	2771				14418												
		STO	0030	-0147	3449	2777	0003321		0017	14423												
		OBS	0030	-0147	34488	2777				14423												
		STD	0050	-0125	3443	2772	0003802		0024	14435												
		OBS	0050	-0125	34433	2772				14435												
		STD	0075	-0108	3449	2776	0003438		0033	14448												
		OBS	0075	-0108	34487	2776				14448												
		STD	0100	-0067	3453	2778	0003240		0042	14472												
		OBS	0100	-0067	34533	2778				14472												
		STO	0125	-0033	3460	2782	0002893		0049	14493												
		OBS	0125	-0033	34598	2782				14493												
		STD	0150	-0005	3463	2783	0002803		0057	14510												
		OBS	0150	-0005	34628	2783				14510												
		STD	0200	0027	3465	2783	0002789		0070	14534												
		OBS	0200	0027	34653	2783				14534												
		STD	0250	0028	3466	2784	0002720		0084	14542												
		OBS	0250	0028	34663	2784				14542												
		STD	0300	0027	3466	2784	0002715		0098	14550												
		OBS	0300	0027	34663	2784				14550												
		STD	0400	0031	3467	2784	0002697		0125	14569												
		OBS	0400	0031	34669	2784				14569												
		STD	0500	0036	3467	2784	0002704		0152	14588												
		OBS	0500	0036	34673	2784				14588												
		STD	0600	0039	3468	2785	0002654		0179	14606												
		OBS	0600	0039	34683	2785				14606												
	STD	0700	0035	3468	2785	0002631		0205	14621													
	OBS	0700	0035	34683	2785				14621													
	STD	0800	0031	3468	2785	0002605		0231	14636													
	OBS	0800	0031	34683	2785				14636													
	STD	0900	0027	3468	2786	0002578		0257	14651													
	OBS	0900	0027	34683	2786				14651													
	STD	1000	0023	3468	2786	0002549		0283	14666													
	OBS	1000	0023	34683	2786				14666													
	STD	1100	0018	3468	2786	0002524		0308	14680													
	OBS	1100	0018	34681	2786				14680													
	STD	1200	0014	3468	2786	0002506		0333	14695													
	OBS	1200	0014	34679	2786				14695													
	STD	1300	0009	3468	2786	0002470		0358	14710													
	OBS	1300	0009	34678	2786				14710													
	STD	1400	0006	3468	2786	0002449		0383	14725													
	OBS	1400	0006	34677	2786				14725													
	STD	1500	0003	3467	2786	0002449		0407	14741													
	OBS	1500	0003	34673	2786				14741													
	OBS	1600	-0002	34673	2786				14756													
	OBS	1700	-0005	34673	2787				14771													
	STD	1750	-0006	3467	2787	0002355		0467	14779													
	OBS	1800	-0007	34672	2787				14787													
	OBS	1900	-0012	34671	2787				14802													
	STD	2000	-0014	3467	2787	0002275		0525	14819													
	OBS	2000	-0014	34671	2787				14819													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARS SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	IO. NO.					10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR	HGT	PER		SEA	TYPE		AMT
318037		GL	66330S	050040W	521	60	03	11	180	1968		055	3338	10	00	0	X		X1	7	7		0074
		WATER				WIND				BARO- METER (mb)		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
		COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE			DRY BULB	WET BULB														
						13		S07	792	-029		-033		6	15								
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-10 ⁷		Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	D ₂ ml/l	PO ₄ -P μg - dl/l	NH ₃ -N μg - dl/l	NO ₂ -N μg - dl/l	NO ₃ -N μg - dl/l	Si O ₂ -Si μg - dl/l	pH	TDS				
		STD	0000	-0180	3406	2744		0006523		0000	14396	695											
166		OBS	0000	-0180	34062	2744					14396	695							805				
		STD	0010	-0184	3407	2744		000646		0006	14396	704											
166		OBS	0010	-0184	34068	2744					14396	704							804				
		STD	0020	-0181	3414	2750		0005908		0013	14400	701											
166		OBS	0026	-0178	34186	2754					14403	695							803				
		STD	0030	-0173	3424	2758		0005153		0018	14407	683											
		STD	0050	-0153	3442	2772		0003815		0027	14422	636											
166		OBS	0052	-0152	34432	2773					14423	633							801				
		STD	0075	-0148	3447	2776		0003434		0036	14429	616											
166		OBS	0078	-0146	34475	2776					14431	614							801				
		STD	0100	-0124	3451	2778		0003195		0045	14445	606											
166		OBS	0104	-0119	34516	2779					14448	603							799				
		STD	0125	-0073	3456	2781		0003002		0052	14474	565											
		STD	0150	-0030	3461	2783		0002813		0060	14499	529											
166		OBS	T0155	-0023	34613	2783					14503	523							797				
		STD	0200	0017	3465	2784		0002754		0073	14529	489											
166		OBS	0206	0021	34659	2784					14532	486							795				
		STD	0250	0028	3467	2785		0002667		0087	14543	481											
		STD	0300	0034	3467	2784		0002705		0100	14554	476											
166		OBS	T0307	0035	34675	2785					14555	475							796				
		STD	0400	0038	3468	2785		0002665		0127	14572	473							792				
166		OBS	0410	0038	34679	2785					14574	473											
		STD	0500	0042	3468	2785		0002688		0154	14590	469							790				
166		OBS	0512	0042	34685	2785					14593	468											
		STD	0600	0043	3469	2785		0002643		0181	14608	468							791				
166		OBS	T0616	0043	34688	2785					14610	468											
		STD	0700	0039	3469	2785		0002630		0207	14623	470							792				
166		OBS	0713	0038	34687	2785					14624	470							790				
		STD	0800	0034	3469	2785		0002605		0233	14637	471											
166		OBS	T0814	0033	34686	2786					14639	471							790				
		STD	0900	0029	3468	2786		0002586		0259	14652	476											
		STD	1000	0024	3468	2786		0002564		0285	14666	487											
166		OBS	T1014	0023	34682	2786					14668	489							790				

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	ALONG E/W	HARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CITY CODE	ID. NO.					10°	1°	MO	DAY	HR.1/10	CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT	

318037	GL	66201S	050529W	521	60	03	12	000	1968		056		3109	10	00	0	X		X1	7	7	0075
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WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS
COLOR CODE	TEMP. °C	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB			

	10	S15	852	-013	-016	6	15			
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MESSNGR TIME NR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g \cdot l/l$	NH ₃ -N $\mu g \cdot l/l$	NO ₂ -N $\mu g \cdot l/l$	NO ₃ -N $\mu g \cdot l/l$	SiO ₄ -Si $\mu g \cdot l/l$	pH	S CD
		STD	0000	-0182	3404	2742	0006703	0000	14395	679							
	007	OBS	0000	-0182	34038	2742			14395	679							807
		STD	0010	-0184	3403	2741	0006730	0007	14395	691							
	007	OBS	0010	-0184	34033	2741			14395	691							808
		STD	0020	-0184	3403	2741	0006738	0013	14397	712							
	007	OBS	0026	-0184	34030	2741			14398	714							805
		STD	0030	-0182	3411	2743	0006130	0020	14401	697							
		STD	0050	-0169	3440	2771	0003924	0030	14414	638							
	007	OBS	0052	-0167	34414	2772			14416	635							800
		STD	0075	-0143	3447	2776	000345	0039	14432	634							
	007	OBS	0078	-0139	34479	2776			14434	631							799
		STD	0100	-0095	3453	2779	0003149	0047	14459	582							
	007	OBS	0104	-0087	34539	2779			14464	574							798
		STD	0125	-0046	3458	2781	0002969	0055	14487	544							
		STD	0150	-0010	3462	2783	0002838	0062	14508	517							
	007	OBS	0156	-0003	34630	2783			14512	512							794
		STD	0200	0019	3465	2783	0002765	0076	14530	496							
	007	OBS	T0208	0022	34653	2783			14533	494							793
		STD	0250	0027	3466	2784	0002737	0090	14542	484							
		STD	0300	0032	3467	2784	0002708	0104	14553	476							
	007	OBS	0311	0033	34670	2784			14555	475							787
		STD	0400	0036	3467	2784	0002712	0131	14571	475							
	015	OBS	0412	0036	34671	2784			14573	475							790
		STD	0500	0039	3468	2785	0002669	0158	14589	464							
	015	OBS	0515	0039	34681	2785			14592	463							790
		STD	0600	0040	3468	2785	000266	0184	14606	465							
	015	OBS	0617	0040	34683	2785			14609	466							788
		STD	0700	0036	3468	2785	0002638	0211	14621	475							
	015	OBS	T0718	0035	34683	2785			14624	476							786
		STD	0800	0029	3468	2785	0002605	0237	14635	478							
	015	OBS	T0813	0028	34681	2785			14637	478							786
		STD	0900	0023	3468	2786	000257	0263	14649	482							
		STD	1000	0019	3468	2786	0002540	0288	14664	490							
	015	OBS	T1014	0019	34675	2785			14666	491							789

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	SURF INDIC	MARSOEN SQUARE		STATION TIME IGMT		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DR.	HGT		PER	SEA		TYPE	AMT
318037	GL		66201S	050529W		521	60	03	12	060	1968	056		3109	30	00	0	X		X1	03		0076
		WATER		WIND		BARO- METER (mbs)		AIR TEMP. °C				VTL CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE							DRY BULB	WET BULB										
		DT	SD	14	S10	898		-018		-020		6		40									
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ σ DYN. M. x 10 ³		SOUND VELOCITY		O ₂ ml/l	PO ₄ -P μg - ml/l	NH ₃ -N μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	CTD		
068		STD	0000	-0183	3397	2736		0007238		0000		14393											
		OBS	0000	-0183	33968	2736						14393											
		STD	0010	-0163	3420	2754		0005513		0006		14408											
		OBS	0010	-0163	34198	2754						14408											
		STD	0020	-0163	3441	2771		0003895		0011		14412											
		OBS	0020	-0163	34408	2771						14412											
		OBS	0025	-0161	34428	2773						14414											
		STD	0030	-0159	3445	2774		0003602		0015		14416											
		OBS	0030	-0159	34447	2774						14416											
		STD	0050	-0120	3452	2779		0003168		0022		14439											
		OBS	0050	-0120	34518	2779						14439											
		STD	0075	-0064	3458	2782		0002877		0029		14470											
		OBS	0075	-0064	34583	2782						14470											
		STD	0100	-0020	3462	2783		0002807		0036		14495											
		OBS	0100	-0020	34618	2783						14495											
		STD	0125	0003	3463	2783		0002808		0043		14510											
		OBS	0125	0003	34633	2783						14510											
		STD	0150	0017	3464	2783		0002808		0050		14521											
		OBS	0150	0017	34643	2783						14521											
		STD	0200	0025	3465	2783		0002777		0064		14533											
		OBS	0200	0025	34653	2783						14533											
		STD	0250	0032	3466	2784		0002744		0078		14544											
		OBS	0250	0032	34663	2784						14544											
		STD	0300	0033	3467	2784		0002721		0092		14553											
		OBS	0300	0033	34667	2784						14553											
		STD	0400	0038	3468	2784		0002697		0119		14572											
		OBS	0400	0038	34675	2784						14572											
		STD	0500	0041	3467	2784		0002738		0146		14590											
		OBS	0500	0041	34673	2784						14590											
		STD	0600	0036	3468	2785		0002633		0173		14605											
	OBS	0600	0036	34683	2785						14605												
	STD	0700	0033	3468	2785		0002616		0199		14620												
	OBS	0700	0033	34683	2785						14620												
	STD	0800	0028	3468	2786		0002583		0225		14634												
	OBS	0800	0028	34683	2786						14634												
	STD	0900	0024	3468	2785		0002585		0251		14649												
	OBS	0900	0024	34679	2785						14649												
	STD	1000	0017	3468	2786		0002532		0277		14663												
	OBS	1000	0017	34679	2786						14663												
	STD	1100	0013	3468	2786		0002507		0302		14678												
	OBS	1100	0013	34678	2786						14678												
	STD	1200	0008	3468	2786		0002472		0327		14692												
	OBS	1200	0008	34677	2786						14692												
	STD	1300	0004	3468	2786		0002436		0351		14708												
	OBS	1300	0004	34677	2786						14708												
	STD	1400	0000	3468	2786		0002412		0375		14723												
	OBS	1400	0000	34675	2786						14723												
	STD	1500	-0004	3467	2786		0002387		0399		14738												
	OBS	1500	-0004	34673	2786						14738												
	OBS	1600	-0008	34671	2787						14753												
	OBS	1700	-0012	34670	2787						14768												
	STD	1750	-0013	3467	2787		0002312		0458		14776												
	OBS	1800	-0014	34669	2787						14784												
	OBS	1900	-0017	34669	2787						14800												
	STD	2000	-0021	3467	2787		0002221		0515		14815												
	OBS	2000	-0021	34669	2787						14815												
	OBS	2100	-0023	34668	2787						14832												
	OBS	2200	-0025	34668	2787						14848												
	OBS	2300	-0027	34668	2787						14864												
	OBS	2400	-0029	34668	2787						14881												
	STD	2500	-0031	3467	2787		0002071		0622		14897												
	OBS	2500	-0031	34668	2787						14897												
	OBS	2600	-0033	34668	2788						14913												
	OBS	2700	-0034	34667	2787						14930												
	OBS	2800	-0037	34663	2787						14946												
	OBS	2900	-0042	34658	2787						14961												
	STD	3000	-0051	3465	2787		0001884		0721		14975												
	OBS	3000	-0051	34653	2787						14975												

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INCHES	MARSDEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR	1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
31	8037	GL	654815	050505W		521	50	03	12	180	1968		057		3210	09	00	0	X		X1	7	7	0077
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB												
									14	S09	930	-025	-034	6	15									
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ σ DTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	NH ₃ -N μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S C							
		STD	0000	-0179	3398	2737	0007186	0000	14395	699														
179		OBS	0000	-0179	33976	2737			14395	699							810							
179		OBS	0008	-0184	33975	2737			14394	699							810							
		STD	0010	-0184	3397	2737	0007184	0007	14395	699														
		STD	0020	-0182	3397	2736	000721*	0014	14397	697														
179		OBS	0021	-0182	33970	2736			14397	697							810							
		STD	0030	-0176	3397	2737	0007188	0022	14402	697														
179		OBS	0044	-0168	33981	2737			14408	696							809							
		STD	0050	-0166	3412	2748	0006080	0035	14412	674														
179		OBS	0065	-0161	34357	2767			14420	634							805							
		STD	0075	-0157	3439	2770	0004020	0047	14424	627														
179		OBS	0087	-0149	34430	2773			14430	619							803							
		STD	0100	-0130	3445	2774	0003633	0057	14442	616														
		STD	0125	-0094	3449	2776	0003450	0066	14463	600														
179		OBS	0131	-0085	34503	2776			14469	594							802							
		STD	0150	-0056	3455	2779	0003147	0074	14486	563														
179		OBS	0175	-0024	34602	2782			14505	530							798							
		STD	0200	-0006	3463	2783	0002779	0089	14518	512														
		STD	0250	0020	3466	2784	0002695	0103	14539	488														
179		OBS	0263	0025	34665	2784			14543	484							798							
		STD	0300	0029	3467	2784	0002674	0116	14551	485														
179		OBS	0350	0034	34675	2785			14562	487							797							
		STD	0400	0037	3468	2785	0002653	0143	14572	478														
179		OBS	T0435	0038	34684	2785			14578	473							797							
		STD	0500	0039	3469	2785	0002632	0169	14589	469														
179		OBS	T0523	0039	34686	2785			14593	468							797							
		STD	0600	0038	3469	2785	0002625	0195	14606	471														
179		OBS	T0631	0037	34686	2785			14610	473							796							
		STD	0700	0034	3469	2785	0002608	0222	14620	478														
179		OBS	T0730	0033	34685	2785			14625	480							796							
		STD	0800	0030	3468	2786	0002590	0248	14635	484														
		STD	0900	0026	3468	2786	0002570	0273	14650	488														
179		OBS	T0929	0025	34682	2786			14655	489							796							

REFERENCE CTRY CODE	IO. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRAFT INCH	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER				
						10"	1'	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT PER	SEA		TYPE	AMT					
318037	GL	65142S	050475W	521	50	03	13	000	1968	058	058	3219	13	00	0	X		X1	7	7		0078				
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIL CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS											
						COLOR CODE	TRANS. UNIT	DIR.	SPEED OR FORCE		DRY BULB	WET BULB														
								13	513	973	-012	-016	7	18												
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g \cdot dl/l$	NH ₃ -N $\mu g \cdot dl/l$	NO ₂ -N $\mu g \cdot dl/l$	NO ₃ -N $\mu g \cdot dl/l$	SiO ₄ -S $\mu g \cdot dl/l$	pH	CO ₂							
		STD	0000	-0190	3334	2685		0012053		0000	14381	816														
014		OBS	0030	-0190	33340	2685					14381	816							818							
		STD	0010	-0180	3333	2684		0012135		0012	14387	836														
014		OBS	0010	-0180	33331	2684					14387	836														
		STD	0020	-0175	3371	2715		0009225		0023	14397	780							819							
014		OBS	0026	-0172	33897	2730					14402	751														
		STD	0030	-0171	3401	2739		0006925		0031	14405	737							809							
		STD	0050	-0164	3441	2772		0003862		0042	14417	679														
014		OBS	0052	-0163	34438	2774					14418	674														
		STD	0075	-0138	3449	2777		0003312		0051	14434	632							805							
014		OBS	0077	-0135	34497	2778					14436	628														
		STD	0100	-0087	3455	2780		0003027		0059	14463	577							802							
014		OBS	0103	-0081	34556	2781					14467	571														
		STD	0125	-0045	3459	2782		0002897		0066	14487	544							797							
		STD	0150	-0015	3462	2783		0002812		0073	14506	518														
014		OBS	0155	-0010	34630	2783					14509	514														
		STD	0200	0014	3465	2784		0002737		0087	14528	486							796							
014		OBS	T0206	0016	34657	2784					14530	484														
		STD	0250	0019	3466	2784		0002674		0100	14538	485							794							
		STD	0300	0023	3467	2785		0002661		0114	14549	487														
014		OBS	0308	0024	34668	2785					14550	487														
		STD	0400	0036	3468	2785		0002646		0140	14571	472							794							
019		OBS	0410	0037	34683	2785					14573	471														
		STD	0500	0039	3469	2785		0002617		0167	14589	467							792							
019		OBS	T0509	0039	34687	2785					14591	466														
		STD	0600	0039	3469	2785		0002624		0193	14606	468							791							
019		OBS	0611	0039	34687	2785					14608	468														
		STD	0700	0037	3469	2785		0002623		0219	14622	466							792							
019		OBS	T0716	0036	34686	2785					14624	468														
		STD	0800	0032	3469	2786		0002590		0245	14636	472							791							
019		OBS	0813	0031	34686	2786					14638	473														
		STD	0900	0023	3469	2786		0002532		0271	14649	486							791							
071		OBS	0919	0022	34685	2786					14652	488														
		STD	1000	0019	3468	2786		0002552		0296	14664	491							793							
019		OBS	T1014	0018	34677	2786					14666	491														
071		OBS	T1018	0015	34678	2786					14665	500							792							
		STD	1100	0012	3468	2786		0002499		0321	14677	504							792							
		STD	1200	0008	3468	2786		0002475		0346	14693	508														
		STD	1300	0005	3468	2786		0002442		0371	14708	512														
071		OBS	T1321	0004	34677	2786					14711	513							792							

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARSEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- TNER CODE	CLOUD CODES		NODC STATION NUMBER	
CITY CODE	ID. NO.					MO	DAY	HR 1/10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA	TYPE		AMT			
																					10"		1"
31	8037	GL	643605	050350W	521	40	03	13	180	1968		059	3146	10	00	0	X		X1	7	7		0079
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
COLOR CODE	TRANS. UNIT	DIR.	SPEED OF FORCE	DIR.	WET BULB	DRY RULR	WET BULB																
			20	S14	077	-054	-059	7	15														
MESSAGE TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ σ _t M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	NH ₃ -N μg - dl/l	NO ₃ -N μg - dl/l	NO ₂ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	S C						
		STD	0000	-0178	3369	2714		0009379	0000	14392	756												
179		OBS	0000	-0178	33691	2714				14392	756						815						
		STD	0010	-0181	3368	2713		0009419	0009	14392	763												
179		OBS	0010	-0181	33684	2713				14392	763						816						
		STD	0020	-0178	3373	2717		0009065	0019	14396	706												
179		OBS	0025	-0176	33788	2721				14398	684						815						
		STD	0030	-0174	3396	2735		0007301	0027	14402	674												
		STD	0050	-0165	3442	2772		0003780	0038	14416	645												
179		OBS	0051	-0165	34434	2774				14417	644						809						
		STD	0075	-0167	3447	2777		0003379	0047	14420	629												
179		OBS	0076	-0167	34476	2777				14421	628						808						
		STD	0100	-0158	3450	2779		0003177	0055	14429	624												
179		OBS	0102	-0157	34500	2779				14430	623						807						
		STD	0125	-0121	3453	2780		0003042	0063	14451	597												
		STD	0150	-0088	3456	2781		0002932	0070	14471	573												
179		OBS	0153	-0084	34568	2782				14474	571						805						
		STD	0200	-0038	3461	2783		0002766	0085	14503	545												
179		OBS	T0206	-0033	34612	2783				14507	542						805						
		STD	0250	-0016	3463	2783		0002744	0098	14522	528												
		STD	0300	-0001	3465	2784		0002686	0112	14537	515												
179		OBS	0306	0000	34647	2784				14539	514						804						
		STD	0400	0015	3466	2784		0002665	0139	14561	501												
179		OBS	0407	0016	34662	2785				14563	500						802						
		STD	0500	0022	3467	2785		0002666	0165	14581	492												
179		OBS	0508	0023	34666	2784				14583	491						802						
		STD	0600	0027	3467	2785		0002667	0192	14600	490												
179		OBS	T0606	0027	34673	2785				14601	490						801						
		STD	0700	0026	3467	2785		0002634	0218	14617	490												
179		OBS	0712	0026	34674	2785				14619	490						801						
		STD	0800	0023	3467	2785		0002629	0245	14632	497												
179		OBS	T0814	0022	34672	2785				14634	498						800						
		STD	0900	0018	3467	2785		0002607	0271	14646	502												
		STD	1000	0014	3467	2785		0002576	0297	14661	504												
179		OBS	T1013	0013	34670	2785				14663	504						799						

REFERENCE CST CODE	IO. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRAFT INCHES	MARSEEN SQUARE		STATION TIME IGMT			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
						10"	1"	MO	DAY	HR L/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
						WATER COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO- METER (mb)													
318037	GL	6349 S	05036 W	521	30	03	14	060	1968		060	2487	21	00	0	X		X7	618		0080		

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARSSEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S' MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER	
CTRY CODE	IO. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT	PER		SEA	TYPE		AMT
31	8037	GL	6349 S	05036 W	521	30	03	14	090	1968		060	2487	25	00	0	X		X1	0	3		0081
		WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS												
		COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB															
		01	50	20	S14	111	-095	-101	6	35													
MESSAGE TIME OF HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \sigma$ OYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{ml/l}$	NH ₃ -N $\mu\text{g} - \text{ml/l}$	NO ₂ -N $\mu\text{g} - \text{ml/l}$	NO ₃ -N $\mu\text{g} - \text{ml/l}$	SiO ₄ -Si $\mu\text{g} - \text{ml/l}$	pH	S CODE						
079		STD	0000	-0178																			
		OBS	0000	-0178																			
		STD	0010	-0183																			
		OBS	0010	-0183																			
		STD	0020	-0168																			
		OBS	0020	-0168																			
		OBS	0025	-0163																			
		STD	0030	-0163	3360	2706	0010107		14402														
		OBS	0030	-0163	33598	2706			14402														
		STD	0050	-0166	3389	2729	0007860		14408														
		OBS	0050	-0166	33888	2729			14408														
		STD	0075	-0165	3417	2752	0005699		14417														
		OBS	0075	-0165	34168	2752			14417														
		STD	0100	-0148	3450	2779	0003169		14434														
		OBS	0100	-0148	34503	2779			14434														
		STD	0125	-0120	3454	2781	0002985		14452														
		OBS	0125	-0120	34538	2781			14452														
		STD	0150	-0094	3456	2781	0002930		14468														
		OBS	0150	-0094	34557	2781			14468														
		STD	0200	-0031	3462	2783	0002740		14507														
		OBS	0200	-0031	34618	2783			14507														
		STD	0250	-0007	3463	2783	0002747		14526														
		OBS	0250	-0007	34633	2783			14526														
		STD	0300	0004	3464	2783	0002760		14539														
		OBS	0300	0004	34639	2783			14539														
		STD	0400	0021	3466	2784	0002740		14564														
		OBS	0400	0021	34655	2784			14564														
		STD	0500	0024	3466	2784	0002692		14582														
	OBS	0500	0024	34664	2784			14582															
	STD	0600	0027	3467	2784	0002684		14600															
	OBS	0600	0027	34668	2784			14600															
	STD	0700	0023	3467	2785	0002657		14615															
	OBS	0700	0023	34668	2785			14615															
	STD	0800	0021	3467	2785	0002644		14631															
	OBS	0800	0021	34668	2785			14631															
	STD	0900	0016	3467	2785	0002607		14645															
	OBS	0900	0016	34668	2785			14645															
	STD	1000	0012	3467	2785	0002575		14660															
	OBS	1000	0012	34668	2785			14660															
	STD	1100	0007	3467	2786	0002534		14675															
	OBS	1100	0007	34668	2786			14675															
	STD	1200	0004	3467	2786	0002506		14690															
	OBS	1200	0004	34668	2786			14690															
	STD	1300	0001	3467	2786	0002477		14706															
	OBS	1300	0001	34668	2786			14706															
	STD	1400	-0002	3467	2786	0002447		14722															
	OBS	1400	-0002	34668	2786			14722															
	STD	1500	-0005	3467	2786	0002416		14737															
	OBS	1500	-0005	34668	2786			14737															
	OBS	1600	-0006	34668	2786			14754															
	OBS	1700	-0010	34668	2786			14769															
	STD	1750	-0012	3467	2786	0002336		14777															
	OBS	1800	-0015	34668	2787			14784															
	OBS	1900	-0023	34666	2787			14797															
	STD	2000	-0031	3467	2787	0002138		14811															
	OBS	2000	-0031	34667	2787			14811															
	OBS	2100	-0046	34665	2788			14821															
	OBS	2200	-0059	34663	2788			14832															
	OBS	2300	-0076	34663	2789			14842															
	OBS	2400	-0086	34665	2790			14854															
	STD	2500	-0102	3466	2790	0001399		14864															
	OBS	2500	-0102	34658	2790			14864															

